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THE TIMES AND REGISTER.

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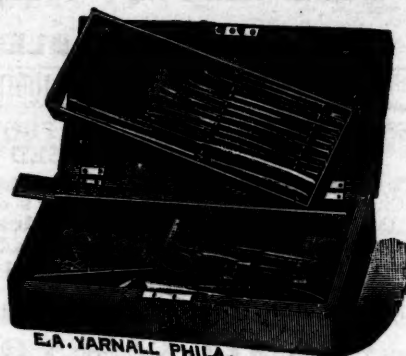
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The Times and Register.

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INTERNATIONAL MEDICAL CONGRESS, BERLIN, 1890.

ON THE PRINCIPLES OF THE TREATMENT OF DIABETES MELLITUS.¹

By F. W. PAVY, M.D., LL.D., F.R.S.

THE first point to be considered in discussing the treatment of diabetes is the rationale upon which it should be conducted. A certain deviation from health, resulting in the escape of sugar with the urine, constitutes the condition that has to be combated, and something requires to be said regarding the nature of the deviation, before we are in a position to approach the question of how it should be treated. The observable phenomena are that, whilst in the healthy subject the food ingested is disposed of in such a manner within the system as not to lead to the exit of sugar from it, in the diabetic subject the food fails to be similarly disposed of, but in part passes out as unconsumed and wasted material with the urinary excretion. It is with the carbohydrate principles that the faulty action lies. These, instead of passing in the direction that results in their consumption and utilization and thus disappearance within the system, as occurs in health, do not follow such a course, but remain in the state of carbohydrate, and are eliminated as such. The chemistry of the body with regard to these principles is at fault. The proper changes do not take place to lead to their being employed as they ought to be, and thereby lost sight of. Represented in other words, through defective assimilative action these principles do not pass on, it may be said, to their proper destination.

¹ From advance sheets furnished by the author.

Thus much is learnt by simply looking at the matter through the light of ingress and egress.

There is no theoretical consideration involved in stating that the carbohydrates in the system of the diabetic fail to undergo those right chemical changes which, in health, lead to their disappearance, and that consequently, whether ingested from without, or formed from the splitting up of nitrogenous matter within, they become disposed of by egress with the urine.

It may further, I consider, be stated that, as a result of the faulty action, the carbohydrate, in the form of sugar, reaches the general circulation in a manner it ought not. No one with any ground of support can contend that the sugar eliminated is formed by the kidney. Whatever appears in the urine has previously existed in the blood flowing to the organ, and osmosis suffices to account for the escape that takes place. I am of opinion it has satisfactorily been made out that healthy urine contains a certain small amount of sugar, and this stands in accord with what is observed as regards the condition of the blood under natural circumstances.

With regard to the presence of sugar in ordinary urine, I conducted a series of observations some years ago, in which I precipitated the sugar by means of lead acetate and ammonia, after previous separation of the uric acid by lead acetate alone. The compound of sugar and lead oxide was then decomposed by sulphuretted hydrogen, and the sugar estimated gravimetrically by boiling with the copper test liquid, collecting the precipitated cuprous oxide, and, subsequently, by the aid of a galvanic current, depositing the copper upon a weighed platinum cylinder. The amount found varied from .098 to .533 parts of sugar per thousand parts of urine.

The condition of the blood, as regards sugar, can be, with precision, defined by the application of the satisfactory analytical procedure which exists at our

command. There is no difficulty, with the exercise of proper attention, in securing the full extraction of whatever sugar is present in a given specimen of blood, and afterwards expressing its amount. From a large number of observations I may state that the quantity of sugar in blood taken under natural conditions does not amount to more than from about .5 to about .8 per 1,000. Under deviations from the natural state, the quantity may be quickly made to rise higher, and this, it may be said, should be borne in mind in looking at results where larger quantities are mentioned by investigators as having been found. I have made analysis of the blood obtained from persons suffering from diabetes, and have a record of seven instances. A general agreement is distinctly recognizable between the amount of sugar escaping with the urine and that found in the blood. Taking one instance where 751 grammes of sugar were eliminated with the urine in the twenty-four hours, the blood contained 5.763 per 1,000; whilst in another with 27 grammes in the urine for the twenty-four hours, the amount in the blood was 1.543 per 1,000. These are the examples giving respectively the highest and lowest figures of the series, both for urine and blood. It is correct to state that the condition of the urine as regards sugar affords an index to that of the blood. This is only what might be expected, seeing that the sugar is a diffusible substance, and that therefore in proportion to its presence in the blood so may it be looked for in the urine. As its presence to more than an exceedingly minute extent is abnormal to the urine, so the same may be said of the blood, and its presence in the blood to the extent occurring in diabetes means the existence of an unnatural state of this fluid, which induces a deviation from healthy action throughout the system. In proportion to the extent of this deviation from the healthy state—that is, in proportion to the amount of sugar reaching the general circulation and thence passing out through the kidney—so will stand the measure of severity of the symptoms of diabetes. Looked at broadly it may certainly be stated that the larger the amount of sugar eliminated with the urine, the worse in every direction is the condition of the patient suffering from diabetes.

We thus trace the symptomatic phenomena of the disease to the abnormal condition occasioned by the presence to an undue extent of sugar in the general circulation.

Whence, it may be next asked, arises this abnormality? I must not enter too far into the discussion of this matter; but the question has a distinct bearing upon the basis of treatment, and therefore requires to be touched upon to a certain extent.

I doubt not it will be conceded by all that the object to be attained by treatment is to diminish the deviation from health as far as practicable. It is only a rational procedure to endeavor to establish and maintain as close an approximation to the healthy standard as our knowledge enables us to effect. Observation shows that the amount of error as regards sugar in the blood, and, following upon this, sugar to be discharged with the urine, is in proportion to the amount of carbohydrate principles, of whatever kind, ingested. It may be said in general terms without, as I have already stated, asserting anything outside the region of fact, that the nature of the error to be dealt with consists in a failure of the power in the system to dispose of the carbohydrates in a manner to lead to their utilization and disappearance. But now arises the question, to what kind of faulty action is this failure to be attributed?

Two points of view present themselves for consideration. We start with the fact that sugar is present in the blood to an extent that is unnatural. Is this due to sugar reaching the general circulation in a manner that it ought not? Or is it to be regarded as natural that all the sugar eliminated in diabetes should reach the general circulation, the error consisting of its not undergoing subsequent destruction, thus leading to accumulation?

It would be out of place to discuss these propositions here. The view to be taken rests on physiological considerations. It is known that I have over a long space of time given close attention to the matter, and my experimental inquiries lead me decidedly to affirm that I consider the source of the sugar encountered in the blood, and eliminated in diabetes, to be attributed to its being permitted to enter the general circulation in a manner that it ought not. This view harmonizes fully with the phenomena observed in diabetes. In health I would say the opportunity is not afforded for the ingested carbohydrates to appear in the urine, for the reason that they are not permitted to pass through the liver and reach the general circulation. In diabetes, on the other hand, we know that they do reach the general circulation in the form of sugar, and from the amount of this principle to be found in the urine it can be stated that they must do so in proportion to the amount ingested. I would therefore say that we have here to deal with a failure of power—assimilative or whatever else it may be called—to arrest the passage of carbohydrates through the liver. Being thus permitted to reach the general circulation, they are placed in a position to be discharged with the urine, and hence, according to the amount of carbohydrate principles ingested, so is the amount of sugar eliminated. With such a state of things existing, elimination necessarily follows upon, and is proportionate to, ingestion, and leads to the production of a result which is found to stand in harmony with observation.

I have spoken of ingested carbohydrate being checked by the liver from entering the general circulation as constituting what occurs under conditions of health; and I do not make this statement unsupported by the information afforded by experiment. I have conducted a large number of experiments upon the point, and can say from them that, when the requisite precautions are observed to obtain a representation of the natural condition of the blood of the systemic or general, and of the portal circulation, a large preponderance of sugar is encountered in the blood of the portal vein, if the observation be made a period of digestion and after the ingestion of food freely containing carbohydrate matter. But it is necessary to bear in mind, if the estimation of the sugar be effected, as is the common practice, with the copper test, that a fallacy may arise from the following circumstance, unless measures are taken to guard against it. With the transformation of starch in the alimentary canal preparatory to absorption, it is not, certainly to any noteworthy extent, carried higher than maltose, which, as is known, has a cupric oxide reducing capacity of sixty-one, as compared with glucose at one hundred; and much of it is only carried into a dextrin with a lower cupric oxide reducing power still. Hence the form of carbohydrate derived from starch, which reaches the portal system, does not possess the cupric oxide reducing capacity of glucose, but something more or less considerably below it. As an actual fact, I have a recorded instance in which the product contained in the portal blood after the

ingestion of starchy food possessed a cupric oxide reducing power standing as low as twenty-one, as compared with glucose at one hundred. In this instance, if reliance had been placed upon the ordinarily conducted method of estimation, the amount of carbohydrate present would have been expressed at only about one-fifth of what it really was. With a form of carbohydrate other than glucose existing, it is necessary to bring it into glucose by boiling with dilute sulphuric acid, to permit of the true amount being determined, and this has been the plan of procedure of late years adopted in the researches I have conducted.

I have considered it necessary to enter into these preliminary details. They display the nature of the faulty condition that has to be dealt with by treatment. Sugar reaches the general circulation in a manner that it ought not, and to its presence in the system are due the various symptoms belonging to diabetes. Through reaching the general circulation it becomes eliminated by the kidney, and is lost. The disease thus involves a sacrifice of material which ought by rights to be turned to account; but this is a point that has but little bearing on the production of the phenomena that are observed in connection with the disease. If it were only a question of waste of the carbohydrate principles of food, there would be no reason against their being taken and allowed to run off. Provided a sufficient amount of other alimentary principles were consumed to meet the requirements of life, no particular harm need arise from the sacrifice of the material occurring. What, it may be said, in reality inflicts the harm is the altered constitution of the blood, occasioned by the presence in it of the sugar which passes through the system to the urine. In proportion to the largeness of the amount of sugar thus traversing the system in the blood, so will be the extent of deviation from the natural state, and so in correspondence the impairment of health that will be found to exist.

The class of cases to which these remarks apply is that in which the discharge of sugar is susceptible of control by treatment, and the class embraces the majority of the cases in which the disease sets in after the middle period of life.

In such instances, starting with the indigestion of carbohydrate, there follows, briefly summarized, as a consequence of the want of proper transformation or assimilative power within the system, an accumulation of sugar in the blood attended with its discharge by the urine. Accumulation of sugar in the blood leads to the production of symptoms proportionate in severity to the deviation from the natural state. The plain object before us is to reduce this deviation as far as is found to be possible.

We cannot be wrong in endeavoring to attain as close an approach to natural conditions as circumstances permit. If the chemistry could be set right, and sugar be prevented reaching the general circulation, the disease would be removed; but it may not be possible to restore the transformative or assimilative power which has become impaired or lost, and then the only way of arriving at what is wanted is to withhold from introduction into the system the alimentary principles which, owing to failure of power to properly dispose of them, cannot be of service, and which, by leading to the passage of sugar through the system, established an unnatural condition, and thereby inflict positive harm.

As long as the passage of sugar through the system is prevented no harm takes place. In the course of all my experience in diabetes I have never known

anything serious to arise as a part of the disease so long as the urine has been kept from sugar. There is nothing, in fact, to form the source of trouble, seeing that there is not the abnormal presence of sugar in the circulation to occasion deviation from the healthy state. On the other hand, when sugar is passing through the system, and the remark applies in proportion to the amount passing through, not only are there to be observed the symptoms ordinarily consequent thereon, but a constant state of insecurity exists, from the danger of the supervention of the serious issues known to follow upon the disease. Moreover, with the unnatural state occasioned by the presence of sugar, nutritive action is not carried on in such a manner as to properly maintain the general strength. As a consequence, the general power becomes sapped, or prematurely exhausted, and the system weakened, and rendered less able to resist the effect of pernicious influences. Such is not the position when sugar is not similarly traversing the system. Indeed there is nothing to render the state essentially different from that ordinarily existing.

The contrast between the two conditions—that is, where sugar is allowed to abnormally exist in the system, and where it is prevented from doing so—is well shewn in cases where the disease has run on for some time without being recognised, and is subsequently controlled by dietetic treatment. What will be observed in such instances will be a gradually advancing impairment of health and increasing severity of the symptoms of the disease, and it is right to assume that progress in the same direction would run on, and the patient grow worse and worse, if the condition continued to be left to itself. Whilst matters are thus proceeding it happens, say, that the existence of the disease becomes recognized, and, if the case be such that the sugar is susceptible of being removed from the urine by the exclusion of the carbohydrate principles from the food, and this exclusion be carried out, this alone will suffice, not only to check the downward progress occurring, but to bring back health and strength to the patient.

The first consideration, therefore, in the treatment, is to control by dietetic measures the passage of sugar through the system. The real point, however, to be aimed at, is to restore the assimilative power over the carbohydrate elements of food, and until this has been accomplished it cannot be said that a cure has been effected, but only that the disease is held in subjection and prevented, as long as the condition can be maintained, from leading on to an unfavorable issue. What most conduces to this desired restoration of assimilative power is the maintenance of a normal state of the system by keeping it free from the passage of sugar through it, and in this way bringing a healthy condition of body to bear in helping to promote a removal of the faulty state.

According to my own experience, opium and its derivatives codeine and morphine are the medicinal agents which, more than any others that I know of, assist in the actual cure of the disease, by which I mean a restoration of the assimilative power which has been impaired.

The influence of these agents may be witnessed in cases where the sugar has been brought down by diet to a certain point, but is unsuspceptible of entire removal from the system by dietetic treatment alone. The complete removal may then be sometimes observed to follow the subsequent administration of the drug, shewing that the medicinal agent has acted in the direction of exerting a restraining influence over the abnormal production and elimination of sugar.

When cases of a favorable nature, that is, cases occurring above the middle period of life, are treated by those combined measures, and the treatment is steadily carried on for some time, it is a matter of common observation that the system of the patient becomes able to tolerate a certain amount of carbohydrate food, without its leading to the elimination of sugar. Often, with strict observance of the required treatment, the assimilative power is found to become so far re-established that a fair amount of the carbohydrate principles, or even an ordinary diet, may be taken without leading to the elimination of sugar. When this is the case, carbohydrate principles, according to the extent found to be tolerated, may be taken without occasioning harm; but the object is to keep below the point at which the escape of sugar takes place, and when this is done actual benefit, instead of injury, is derived therefrom.

Here I may refer to the aid afforded by the quantitative testing of the urine. It is absolutely essential, I consider, in the management of a case, to possess the knowledge thus supplied, not only for the purpose of regulating the treatment according to the progress made, but also for keeping a check upon the manner in which the directions given are being carried out. When in a case it is found to happen that the assimilative power has been restored, it is permissible to consider that an actual cure has been effected; but it is always requisite to bear in mind that a weak point has existed, and that it is advisable to avoid unduly taxing a power which has previously given evidence of being at fault.

FURTHER OBSERVATIONS UPON FOOT-AND-MOUTH DISEASE IN ITS RELATION TO HUMAN SCARLATINA AS A PROPHYLACTIC.

By J. W. STICKLER, M.S., M.D.,

ORANGE, N. J.

ON December 1, 1887, a paper upon the above subject was read in the presence of, and discussed by, the New York Academy of Medicine. Since that time I have obtained from Dr. M. K. Robinson, of Dover, England, additional statistics which he has secured for me at considerable personal inconvenience, and which are, I think, of sufficient interest to quote in connection with what has already appeared in relation to the matter under consideration.

First, let me review enough of my former paper to present clearly the subject as we are now to consider it.

During the early days of February, 1884, a remarkable outbreak of sore throat occurred in Dover, England, which was due to the drinking of milk obtained from cows affected with foot-and-mouth disease. During the week ending February 9, two hundred and five persons were attacked with the disease. "The majority of persons who suffered during the Dover epidemic presented two prominent symptoms in common, viz., inflammatory sore throat and enlargement of the lymphatic glands;" but the lesions produced varied considerably in different cases. The vesicular eruptions were followed either by a raw, red, cedematous appearance of the mucous membrane, or white patches, and the ulcers which supervened, assumed in many instances a chronic character, with thick puckered edges, and were a long time in healing.

When the inflammation of the tonsils went on to suppuration, recovery was much slower than after

common quinsy, and the enlarged cervical glands remained tender, red and swollen long after the throat symptoms had subsided, resembling, in this respect, the sequelæ of scarlet fever. (I am quoting now from Dr. Robinson's original paper on the Dover Epidemic). Erysipelas and purulent formations were concomitants, also, of the epidemic. "In some instances the feet of those who suffered were swollen and painful, simulating rheumatism.

"A fatal termination resulted in the cases of two children, who had very bad throats and mouths, with the extension of the disease, in one case, to the respiratory tract, their deaths being, in the opinion of the medical attendant, due to the poisonous effects of the milk." "Two persons who labored under chronic kidney disease, were respectively attacked with sore throats, and died on the same day; other people in the same houses suffering, also, from the 'epidemic sore throat.'" "A servant girl was attacked on February 4 with sore throat and pain in the limbs, complained on the 8th of great pain in the epigastric region, and dyspnoea. There was a purple red patch on the left cheek, extending to the nose. At 3 P. M. on the 9th she passed into a state of coma, and died at 4 P. M." "Mr. Wood says this was an obscure case, but thinks it possible that it was one of blood poisoning. Being in England in 1886 to investigate this unusual epidemic of sore throat, and wishing, if possible, to learn what relation, if any, it bore to scarlatina, I went to Dover to consult with Dr. M. K. Robinson. He received me very kindly, and said he would go with me to the various homes where the disease had existed, that we might gain the desired information.

The following facts were elicited:

1. That members of eight different families, who had previously had scarlet fever, escaped the "throat epidemic," while all the other members contracted the disease, all alike having partaken freely of milk infected with the contagium of "Foot-and Mouth Disease." The number of those who escaped was twenty-three +. I say plus twenty-three, because in the case of one family we were told that the father, mother, and servants escaped, the number of servants not being stated. Allowing the number of servants to be two, the whole number would be twenty-five.
2. That of one hundred and eighty-three persons who had the "throat epidemic," sixteen had had scarlet fever.
3. That four of the sixteen persons who had had scarlet fever, had a *mild form* of the "throat epidemic."
4. That two of the affected individuals had scarlatina *when young*.
5. That *none* of the persons affected with the "throat epidemic" had contracted scarlet fever from natural, accidental exposure, between the time of having the "sore throat" and the date of my visit (1886).

At this point, and in close connection with what has just been stated, let me quote, *in extenso*, the paper recently received from Dr. Robinson, the one alluded to in the first few lines of this article. It is as follows:

"DEAR DR. STICKLER.—I have at last been able to complete the further inquiry which you asked me to make, and beg to furnish you with the information sought for, which you may consider more complete than my previous communication to you upon the subject. The following summary has been compiled from statistics containing all the information procurable, concerning the epidemic of 1884:

Number of cases of foot-and-mouth disease which came under observation during an epidemic of this disease at Dover, England, in 1884.	Number of persons attacked who had previously suffered from scarlet fever.	Number of persons attacked who had not previously suffered from scarlet fever.	Number of persons who, having had scarlet fever and imbibed infect'd milk, escaped foot-and-mouth disease.	Number of persons who had foot-and-mouth disease in 1884, since exposed to scarlet fever without contracting the disease.
205	23	161	36*	14

"With regard to the prevalence of the disease in Great Britain it does not appear to have been worthy of recognition in our official nomenclature of diseases, and it has escaped notice by the leading authors of our text-books on medicine. When my interest in this disease, as developed in the human subject, was aroused, I had to resort to veterinary practitioners and veterinary works, in order to obtain descriptions of the symptoms and history of the malady. I am not surprised, therefore, that Sir James Paget should write to you, to the effect that he was not aware of the existence of the disease, when it fails to find a place in British nomenclature and teaching. It is now twenty years ago, when Medical Officer of Health for the Borough of Leeds, that a distinct epidemic of this disease came under my notice. It was confined chiefly to children who had partaken of milk from cows suffering from this disease, and the symptoms in the human subject were most characteristic. Since that time *limited* outbreaks have, from time to time come under my observation, which, although clear to my mind as to their nature and origin, were limited in point of number of cases on each occasion.

"Then came the sudden and widespread diffusion of the disease in Dover, which, with considerable labor, I was able to trace so clearly to its source that I felt it my duty to bring the matter before the medical profession and place on record the facts then elicited.

"When the history of this last-mentioned epidemic obtained notoriety from its publication in the daily papers, I had many communications on the subject from persons who had evidently sustained practical experience of the disease, but the nature of which had escaped recognition at the hands of medical practitioners. Thus Captain Reid, of Backsford House, Ashford, says in a letter to me: 'Some few years ago, whilst staying at a fashionable watering place, my children were poisoned from milk, which I ascertained for certain was derived from a cow suffering from foot-and-mouth disease. I at once recognized the disease, because on a previous occasion, five of my household had suffered from drinking the milk of a cow belonging to myself, which was afflicted with the disease.'

"Another gentleman told me that, being thirsty, he went into his cow-shed and drank off a glass of milk just yielded from one of his cows, which he found afterwards was ill at the time, and subsequently pronounced by the veterinary surgeon to be suffering from foot-and-mouth disease. This gentleman was attacked with bad mouth and throat.

"Another gentleman said: 'When my cows suffered from the disease, my man, along with his wife and family, would persist in drinking the milk from the diseased animals, and they were all attacked with the malady.' The Messrs. Crowhursts, veterinary surgeons, wrote me, saying that when attending upon animals suffering from foot-and-mouth disease, the

* This number includes persons other than families in which the disease broke out, but who obtained the same milk supply.

attendants upon such animals had often complained of the same symptoms which were exhibited by the animals in question, etc., etc.

"The disease as it occurs in animals has been variously described as eczema epizootica, aphthous fever, epizootic aphtha, and murrain, and is characterized by fever and a vesicular eruption in the cleft of the hoofs, or in the mouth, with extension into the throat and nostrils. Shivering and a ropy discharge from the nose are often noticed at the onset of the attack. When the vesicles are ruptured, ulcers form, or red spots, bare of epithelium, appear, with the characteristic soreness which ensues.

"The incubation period varies; but animals have been known to suffer twenty-four hours after exposure to infection. Various complications occur, and erysipelas and pyemia have been known to supervene.

"The following characteristics were noticed in the human epidemic which occurred at Dover: Shivering, followed by headache and fever; pains in the limbs; thirst; parched lips, and a vesicular eruption on the throat and mouth. A common accompaniment was enlarged cervical glands; many had enlarged tonsils, in some instances proceeding to supuration.

"In the *Veterinary Review*, Vol. iv, p. 502, and Vol. v, p. 187, will be found some evidence furnished by Dr. Balfour and Mr. H. Watson, on the transmission of foot-and-mouth disease by milk to man, and in the same periodical (Vol. v, p. 81) Mr. Hislop records some instances of human beings taking the disease by inoculation. Parkes, in his 'Practical Hygiene,' says: 'There has been much discussion whether the milk from cows with the foot-and-mouth disease causes affections of the mouth, etc., in human beings. There are some striking cases which seem sufficient to prove that diseases of the mouth, aphthous ulceration, general redness, diphtheritic-like coating and swollen tongue occur.' In the proceedings of the Royal Society for 1881 a new form of febrile disease is described by Dr. Ewart, the propagating agent being milk from a dairy near Aberdeen.

"Gamgee, the eminent veterinary surgeon, says that the disease is communicable to man, as the history of the various outbreaks of disease undoubtedly prove. I have referred in detail to the above-mentioned symptoms as observed by reliable narrators, because I am satisfied that many ill-defined throat affections are due to bovine sources. During epizootic epidemics I have again and again noticed the concomitant prevalence of aphthous affections and diphtheritic-like appearances described often under the heads of follicular stomatitis and follicular tonsillitis.

"Dr. C. Fox described a peculiar epidemic, characterized by inflammation of the tonsils, extending into the pharynx, and sometimes to submaxillary and cervical glands, and accompanied by yellowish patches on the throat.

"This outbreak occurred in October and November, 1875, in a parish that differed from its neighbors in this: that the inhabitants were supplied with water from a stream polluted at various parts of its course by the drainage of farm-yards, the inference being that the specific poison was derived from the infected excretions of cattle.

"That some intimate relationship exists between scarlet fever and diphtheria appears to be extremely probable; my own view being that diphtheria can be produced by the pabulum on which the scarlet fever poison exists, during the interval between its passage from one human subject to another. I have known

instances where diphtheria has broken out at isolated spots in the country, when, after diligent search, no exposure to any previous case of diphtheria could be traced; but where I know that scarlet fever had previously occurred, and that those who suffered from diphtheria had been exposed to exhalations from scarlet fever infected excretions.

"Again, it is the custom in many parts of England to cart town refuse and garbage into the country, and there may be witnessed the disgusting spectacle of swine feeding upon the scavenger's motley collection, including, as such heaps do, not only decaying vegetable and organic matter, but rags and poultices from hospitals and sick-rooms.

"Many times has swine fever (which some maintain is allied to scarlet fever) broken out amongst pigs kept as above described, and I have also noticed that, in the same locality, the swine fever has been accompanied by foot-and-mouth disease amongst the cattle; but, what is far more important, human beings that have consumed milk from the infected cattle have suffered from diphtheritic-like affections of the throat. It is a striking fact that, in localities where foot-and-mouth disease has prevailed, there also has been a large development of diphtheria or its congeners.

"The cases of foot-and-mouth disease officially reported in England increased from 37,000 in 1882 to 461,000 in 1883; and following this enormous increase of the epizootic disease there was a large increase in diphtheria. The number of deaths alone from this disease in England and Wales during the first quarter of 1884 being 1,270, and the death-rate from the malady higher than that recorded in any quarter of the previous fourteen years. The above observations I have not published; but you are at liberty to make any use of them you think proper.

"Believe me, yours faithfully,

"M. K. ROBINSON."

In immediate connection with this letter and the statistical table already given, let me call your attention to the facts concerning an outbreak of foot-and-mouth disease in Bethersden, England, in 1884. They are as follows, in tabulated form, namely:

No. of cases.	Age	Scarlet fever previously.	Scarlet fever since.	Remarks by Dr. M. K. Robinson.
1	8	0	0	Members of same family.
2	10	0	0	
3	18	0	0	
4	6	0	0	Members of same family. Four other members who had previously had scarlet fever escaped epidemic of sore throat.
5	8	0	0	
6	5	0	0	Same family—7 and 8, mild sore throat, probably modified by previous scarlet fever. (Dr. Robinson.)
7	7	1	0	
8	9	1	0	Very slight case of scarlet fever last year.
9	3	0	1	
10	8	0	0	Same family.
11	2	0	0	
12	1	0	0	
13	9	1	0	Same family. No. 13, mild case of scarlet fever. No doctor employed.
14	7	0	0	
15	11	0	0	
16	9	1	0	Same family. No. 16, mild case of scarlet fever.
17	2	0	0	
18	12	0	0	Same family. Three other members of this family who had previously had scarlet fever escaped throat epidemic.
19	5	0	0	
20	4	0	0	
21	2	0	0	Same family. Case 22, mild throat case.
22	22	1	0	
23	6	0	0	
24	7	0	0	
25	7	1	0	
26	8	0	0	
27	6	0	0	No. 28 said to have been mild. No doctor.
28	9	1	0	
29	9	1	0	No. 29, mild throat case.

We learn from this table—

1. That two members of one family who had not previously had scarlet fever developed the foot-and-mouth disease, while four other members who had previously had scarlet fever escaped.

2. That three members of another family who had not previously had scarlet fever contracted foot-and-mouth disease, while the three other members who had had scarlatina escaped.

3. That but one person developed scarlatina after having had foot-and-mouth disease, and that attack was very mild.

4. That persons who, having had scarlatina, contracted foot-and-mouth disease, had the latter affection very mildly.

5. That these individuals developed the foot-and-mouth disease as a result of exposure to manure derived from cattle affected with apthous fever.

As supplementary evidence in favor of the prophylactic power of foot-and-mouth disease against scarlatina, I will re-state the facts concerning three children whom I inoculated with the virus of foot-and-mouth disease.

CASE I.—M. M—, about eight years of age, had never had scarlet fever. On January 12, 1884, I injected, under the skin of his arm, a small quantity of virus taken from a cow having a mild attack of foot-and-mouth disease. A short time thereafter the cervical glands became enlarged and tender to the touch. There was no marked systemic disturbance, neither was there any sore mouth or throat. All signs of glandular enlargement and tenderness had disappeared in six or seven days. He was then taken to a house in which there was a boy sick with scarlet fever. The disease was in the desquamating stage, and the throat still sore. His parents being poor, the pillow upon which the patient lay had not been exchanged for a clean one since the beginning of the sickness. This pillow was placed upon the face of the boy who had been inoculated, and held there some time. He was then made to inhale the breath of the patient, and afterward to remain some time in the sick-room. The boy did not develop scarlatina after having been thus exposed, neither has he contracted the disease since, although there has been opportunity for infection.

CASE II.—B. P—, aged four years, had never had scarlet fever. On March 6, 1884, I inoculated her in the arm with a small quantity of foot-and-mouth virus. On March 13 her temperature rose to 103° F. Her mouth was sore without showing any vesicles, and she complained of a prickling sensation in her throat. She had slight headache, the appetite was impaired, and she was quite peevish. There was no eruption at any point on the body. By March 20 she was well. She was then taken to a house where I had a patient in the desquamating stage of scarlet fever. The patient was very sick at the time because of complications; indeed, was so ill that I was somewhat doubtful about the issue. The same plan of exposure was adopted as in the first case, except that I could not get the inoculated child quite near enough to the patient to inhale her breath; but the "pillow exposure" and the length of time she remained in the sick-room afforded a good opportunity for infection. She did not subsequently develop scarlet fever.

CASE III.—J. M—, aged about ten years, had never had scarlatina. I inoculated him just as I did the first two. He did not afterward develop any systemic disturbance or local lesion. After a lapse of three years, with opportunity for infection, he tells me he has not had scarlatina.

These cases, taken in connection with others, suggest gratifying results should further inoculations be made.

In one of my note books I find this entry, namely: "Thursday, August 19, 1886, went with Dr. Robinson to Canterbury, England, where we saw the health inspector, who told us that in one family the foot-and-mouth disease attacked *only* those members who had not had scarlet fever. We found four persons suffering from the epidemic sore throat who had had scarlet fever."

Without commenting now upon what has thus far been stated, I will describe, somewhat briefly (quoting Prof. Walley), foot-and-mouth disease as it affects animals.

Synonyms.—Murrain, eczema epizootica, distemper, epizootic aphtha, vesicular aphtha, vesicular epizootic, aphthous fever.

Definition.—It is a vesicular eruptive, or exanthematous affection, due to a specific ferment, and having its lesions localized in the skin and mucous membranes.

Characters.—Eczema epizootica is probably indigenous in the bovine tribe only, but there is no direct proof that it may not originate in the ovine species also. It readily attacks sheep, goats, swine, and poultry; it is easily transmitted to the human subject, and it has been described as existing in the horse, the dog, wild fowl, deer, wild boar, etc. Walley says little or nothing is known of the ferment of this disease. Dr. Klein, of London, says the disease is caused by a micrococcus which forms in artificial media, besides dumb-bells (diplococcus), beautiful chains (streptococcus). These differ in length according to the number of micrococci composing them, the short chains being a linear series of four, six, or eight micrococci; the longer ones of more than eight up to thirty and more micrococci. The longer chains are always curved, and even convoluted.

In different outbreaks it localizes itself mainly in the feet, the udder, the mouth, the skin, and mucous membranes, respectively.

One attack does not give immunity from others; and not only may an individual animal suffer several times from it in the course of its life, but even twice or thrice in a season, though in the great majority of cases each successive attack becomes milder in its character. Dr. L. McLean, Government Veterinary Surgeon, says, "In the bovine species one attack of foot-and-mouth disease does not give immunity from the disease; but in the ovine species it does."

The channels by which nature endeavors to eliminate the poison are the salivary and mammary glands, the mucous glands of the bronchial and intestinal mucous membranes, and the skin.

The effects of the poison on the skin are invariably well marked, desquamation of the cuticle being extensive; but while this is a common characteristic of many zymotic diseases, it nevertheless points to the necessity of encouraging the elimination of the poison by this channel.

Period of Incubation is, compared with other zymotic affections, short, viz., from twenty-four hours to three weeks. The average is from two or three to five or six days.

Invasion is, on the whole, rapid and pronounced—the manner of invasion depending upon the amount of poison received into the system, the condition of the host, and the surrounding circumstances.

Duration is variable, and is regulated by the intensity of the attack and the care which is bestowed upon the patient; from ten to twenty-one days may

be looked upon as the average period of duration where the disease runs a regular course, and is not succeeded by important sequelæ.

Fatality depends largely upon the character of the outbreak; in some seasons death in any animal is rare, while in others great numbers succumb to the primary effects of the disease.

Propagation.—It is propagated by direct and mediate contagion, as the virus is both fixed and volatile, but it is only diffused through the medium of the atmosphere at comparatively short distances. As the saliva, the nasal, conjunctival and intestinal mucous are highly charged with the virus, it is most readily spread by the conveyance of these secretions to healthy animals, by many direct and indirect means.

Symptoms and Course.—The symptoms must be divided in general, or constitutional, and local.

The premonitory constitutional symptoms are identical with those of other zymotic diseases. These are: Isolation, usually very marked; arched back in cattle; tucked up abdomen; muscular twitchings or shiverings, more or less severe; erection of the hair, the skin being hot and dry; and stiffness of gait, which is most pronounced when the feet—and particularly so if three or the whole—are affected.

Bowels usually a little constipated; urine sometimes scanty, high colored, and laden with solids, especially as the disease advances; at other times it is profuse and limpid. There may or may not be mucous discharge from the eyes and nose, with increased lachrymal secretion from the former. In young animals, exposed to inclement weather, such discharge is very constant, and in the course of a few days, that from the eyes forms a yellow accretion at the inner canthus of the lids and down the sides of the face, a similar accretion being formed, by the nasal discharge, round the edges of the nostrils.

Under exposure, an irritable bronchitic cough is present, by localization of the lesions in the bronchial mucous membrane.

Temperature always elevated to the extent of 2° or 3° F.; the pulse and respiration may not be much disturbed. Appetite indifferent when invasion is rapid, and the fever high, or the stomach and bowels affected; in ordinary cases, a desire for food is evinced, even though the lesions in the mouth are extensive. In ruminants, rumination is performed naturally, unless the mouth is much affected.

In milch animals, interference with the lacteal secretion will be largely regulated by the localization or non-localization of the lesions in the udder.

As the disease advances, the phenomena above enumerated, increase in intensity, and continue to do so until the climax—which may be calculated at from the third to the seventh day—is reached, after which they gradually subside.

In addition, vesicular and pustular eruptions may appear on the skin of different parts of the body; they are most often seen in the pig, and the primary may be succeeded by secondary and even tertiary crops.

Jaundice is a very frequent concomitant.

Desquamation of the cuticle is an invariable accompaniment of convalescence, the skin being covered with abundant bran-like scales of a yellow color; it is also extremely irritable, animals rubbing against prominent objects vigorously.

If the lesions are localized in the gastro-intestinal mucous membranes, colicky pains are induced.

The local lesions are, so far as the skin is concerned, usually seen in parts devoid of hair, or where it is delicate, as the feet, the mouth, the udder, and in

some cases the vagina of the female, and the sheath of the male. In all animals, the earliest pedal sign is lameness—more or less sudden and severe—with uneasy movements of the limbs. In the course of a few hours, subsequently to the advent of the lameness, the vesicular eruptions characteristic of the disease appears. The pedal vesicles are bladder-like elevations, varying in size from a hazel-nut to a walnut. If allowed to remain undisturbed, the vesicles burst in from three to twelve hours, and discharge a limpid, colorless, or pale-straw colored fluid; the jagged edges of the lacerated epidermis become retracted and slightly everted, and form an irregularly-raised white boundary around the margin of the resulting sore. The cutaneous structure, which is exposed by the eruption of the vesicle, is of an intensely scarlet color.

The advent of mouth lesions in cattle, is marked by smacking of the lips, or rather the mouth; by dribbling of the saliva, and by partial or total inability to masticate. The mouth vesicles vary in size and character, according to the part of the buccal membrane in which they are located. The pad vesicles appear as flattened elevations of the epithelium, without areolæ around their bases. On the tongue, the vesicles are much larger than elsewhere. They vary in number from one to five, and are very resistant. They present much the same character as on the pad. Two or three may coalesce and form one very large vesicle.

On the inside of the cheek, the reddened condition of the mucous membrane is more discernible, and the resistance of the vesicles considerably diminished.

On the lower lip, vesication in ordinary cases, is comparatively infrequent. The vesicles when they appear are much smaller. On the skin outside the lips vesicles are rarely seen. More frequently secondary than primary, are small, and succeeded by pustules and scabs.

In the course of a few days, the epithelium will be so far restored as to form a perfect coating over the inflamed tissues. In the cow, vesicles usually appear a few hours after the premonitory signs of the disease, on the body, and around the apex of the teats, but they may be developed in any part of the udder. At first they are discrete, but frequently become confluent. They vary in size from a three-penny piece upwards. The period of vesication will vary from one to two, to about thirty-six hours, depending upon amount of friction and pressure to which they are exposed.

The exposed epidermis, after rupture of the vesicles, is intensely hyperæmic, but if the parts are undisturbed, it quickly becomes covered by inspissated pus, coagulated lymph, and epidermic cells; the hair, when present, assisting in forming a coherent brown-colored scab which has usually irregular edges, and varies in thickness.

The substance of the tongue is usually much more flaccid than normal, and if the papillæ are carefully examined, it will be found that in the earlier stages of vasication, they are much congested, subsequently becoming atrophied and shriveled. It sometimes happens that when the tongue is seized, to explore the mouth, large patches of epidermis come away in the hand, as if the tongue had been boiled. This occurs in the aphthous stage when the vesicles have ruptured, and, the epidermis being removed, erosions appear. (Fleming.)

Thus far I have simply stated facts, such facts as should receive the most earnest attention of the profession. I make this statement without apology,

because I am satisfied that when a disease failed to attack every member of eight different families who had previously had scarlet fever, and attacked every other member who had not had scarlet fever, there was some good reason for it; that reason apparently being—not coincidence—but the protective influence of one disease against the other.

Further, not only was this true of eight families in Dover, England, but of two families in Bethersden, England. Again, there were other individuals, who, having had scarlatina, escaped the throat epidemic, and, as already stated, when the throat epidemic occurred in those who had had scarlatina, it was mild in character, as far as could be learned; and, in the one instance in which scarlatina occurred after the epidemic sore throat, it was a very mild attack. Here, again, there must be some reason for the mildness of one disease when appearing after the other in the same individual.

Thomas, in his article on scarlatina, says: "Soon, perhaps already on the second or third day, the entire coating of the tongue, with the superficial layers, exfoliates either at once, or in successive sections, in a manner found in no other disease." Now, here is a disease (foot-and-mouth disease), in which this very thing does occur, as already stated on the authority of Fleming. In both, the papillæ of the tongue are swollen and prominent; in both, there is abundant desquamation of the cuticle. Sometimes, in scarlatina, ulcers occur upon the tongue, cheeks, and gums, as in foot-and-mouth disease. Foot-and-mouth disease frequently attacks cattle more than once; sheep, on the other hand, do not so commonly have a second attack. In the case of scarlatina, Thomas (Ziemsen, Vol. 2, p. 186), says: "As a general fact, it cannot be disputed that scarlatina belongs to that class of diseases which occur but once; nevertheless, exceptions appear to be of comparatively frequent occurrence." He then says, he collected, in the literature to which he had access, about two hundred cases of a second infection, beside a few reports of a third and fourth infection in the same individual. Murchison observed relapses of scarlatina in two sisters. Trojanowsky says, "in two of his cases of secondary scarlatina, both parents had also the disease twice, and in a third case the father had been affected twice." Richardson states that he has experienced scarlatina in his own person three times. Sir Robert Gillespie tells of a young lady who had scarlatina three times, the diagnosis of which was unequivocal (Ziemsen, Vol. 2, p. 191). Henrici, during the epidemic of scarlatina in Kiel, from 1797 to 1798, attended a woman who was then undergoing her seventeenth attack of scarlatina with all its symptoms (Ziemsen, Vol. 2, p. 192). The latter statement may be exaggerated. Dr. Edward J. Ill, of Newark, N. J., writes me as follows concerning some of his own patients: "One of my patients, six years old, had an attack of scarlatina in 1881; in 1883, she had another attack; in January, 1887, a third attack; in 1888, she had a fourth attack. Desquamation followed in each instance." Another case: "J. G., aged twelve years, had scarlatina in 1888; had a prior attack in 1881."

The tendency to suppuration of the tonsils, and the continued enlargement of the cervical glands in persons who had the foot-and-mouth disease, suggested a resemblance of the two diseases (scarlatina and foot-and-mouth disease).

A consideration of the above, inclines one to the opinion that the two diseases under consideration may be more closely allied to one another than has heretofore been supposed to be true, and that it is probable

that an individual who has had one disease, either will not contract the other on exposure, or will have it in a very modified form, if he contract it. Dr. Robinson, in a personal letter to me, says: "As to the prophylactic power of one disease against the other, my own view is, that if persons who have had one disease, and are exposed to the other, suffer from the alternate one, they do so in a mild form. If there is some intimate relation between the two maladies, it is fair, I think, to assume that persons who have suffered from one form are less susceptible to the other. I do not think I mentioned in my former communications, as evidence of the relation of the two diseases, that in the County of Norfolk, during a period of great prevalence of foot-and-mouth disease amongst cattle, in 1883, there was a great increase of scarlet fever, and especially a scarlatinal sort of sore throat. This fact was stated in the House of Commons during a discussion of the Contagious Diseases (Animals) Bill, on March 18, 1884, and reported in the daily papers the following day." Professor Law said, in discussing my former paper: "Epizootic foot-and-mouth disease had at times attacked nearly all the cattle and the people of Great Britain, and, considering the fact that the disease was so prevalent, there should be less scarlet fever in Great Britain than in America, where the foot-and-mouth disease is comparatively unknown."

Sir James Paget, in a letter to me upon this point, says: "I have not seen or heard of foot-and-mouth disease communicated to persons in this country. I have asked some of those likely to have known of such cases if they had occurred, but I have learned nothing from them."

Professor Thomas Walley, of the Royal Dick's Veterinary College, Edinburgh, Scotland, says in a communication to me: "Very few people contract eczema" (foot-and-mouth disease). Professor E. Klein, in speaking upon the same matter, says: "My dear Sir.—In answer to your letter of October 29, 1889, as to whether many of the people of Great Britain have had foot-and-mouth disease, I must say that during the nineteen years that I have resided in this country, I have heard of some outbreaks of foot-and-mouth disease amongst the people in various localities, but they were always localized and did not involve many cases. I must say that I have never been more surprised, than when you told me in your letter that Professor Law offered the remark that many persons in England have had foot-and-mouth disease. As a matter of fact, the contrary is the case. During the last four or five years, I have not heard of any appreciable amount of foot-and-mouth disease; in fact, I do not think there has been any epidemic of it. I have made inquiries of several friends in the country, and I hear from them that many practitioners have never seen a case in the human, in fact, some, in practice during the last four years, did not know it to have occurred in a single instance in their districts. Only a few weeks back I had a class in bacteriology, at which were twelve gentlemen, in practice as health-officers in various parts of England. Every one of them to whom I put your question, laughed at the idea that foot-and-mouth disease is alleged to be a common disease in man in this country." These gentlemen, evidently, do not agree with Professor Law upon the above point. Even if we assume that the disease is more common than it is supposed to be, such facts as are set forth in this paper concerning it, in its relation to scarlatina, have never been noticed or commented upon, and, to my mind, are not affected by the statement that scarlatina is very prevalent in

Great Britain. Dr. J. Lewis Smith said, in discussing my former paper: "Since the time of Jenner, the hope has been awakened that some of the other fatal infectious diseases, and especially scarlet fever, might be prevented, as small-pox has been, by the inoculation of a milder and modified disease derived from the lower animals." Now let me ask my professional brethren, in a spirit of perfect candor and honest inquiry, if, in the evidence furnished by the epidemics in England, the facts concerning which are herein quoted, we have not a fairly secure basis upon which to build the hope that scarlatina may be either prevented or modified, by introducing into the human system, properly prepared and attenuated foot-and-mouth disease virus. Let me also ask if enough cases have not been quoted; a sufficient number of experiments performed; and the ultimate results of sufficient importance, to warrant a more extended trial being made of this proposed method of preventing the development of, or modifying one of the most fatal and dreaded diseases? No theoretical objection, however adroit and well planned, can settle the question before us; further actual experience with the diseases, in their clinical and apparently prophylactic relation to each other, must be had, before any one can positively deny, or prove to be true, that which seems to be a fact, namely, that scarlatina and foot-and-mouth disease are mutually protective.

Suppose some drug had been administered to certain members of eight families in Dover, England, prior to the appearance of the "throat epidemic," and that when the families were exposed to the contagium of the epidemic diseases, only those who had taken the drug escaped, while every other member contracted the disease. Do you not think that drug would have a new interest, and be given a fair trial, in order to determine, beyond dispute, whether it would, in the majority of cases, exercise this preventive influence? Now, why not, instead of saying: how can this be true? or this cannot possibly be realized—give the proposed method a fair, honest trial, just as you would give the drug a fair trial, or just as Jenner gave his method a trial, and then be guided in the future by the results. Suppose a certain number of children, in a children's hospital for the treatment of contagious diseases, were inoculated with a modified virus of foot-and-mouth disease, and after recovery from the effect of such treatment, should be put into a ward with scarlatina patients, and allowed to remain sufficiently long to be thoroughly exposed to the contagium of the disease, would not that be a fair way to settle the question? What I wish, is simply to determine positively, and as soon as possible, whether the escape from the "throat epidemic" of certain individuals in the two epidemics in England, and of the three children from scarlatina whom I inoculated with the virus of foot-and-mouth disease, be due to the protective influence of the one disease against the other, as appears to be the case. If we learn that we may thus prevent the development of a disease so common, oft-times so fatal, and so frequently followed by distressing sequelæ, will we not confer a blessing upon those who are susceptible to its contagium? If, on the other hand, we discover that we cannot, in the majority of instances, confer this immunity, we shall at least have made a commendable effort to realize that, which a large number of clinical facts seemed to indicate as possible of accomplishment.

THE alleged case of cholera in London was undoubtedly one of cholera morbus.

RHEUMATISM AND ITS TREATMENT BY THE TURKISH BATH.¹

By CHAS. H. SHEPARD, M.D.,
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AT what time the disease called rheumatism first made its appearance is not known. The name was first applied in 1642, in a treatise on the subject by one of the most celebrated physicians of his time, M. Guillaume de Baillou, who was an author of several medical works of great merit.

No disease has proved more perplexing. Its uncertain course at times seems to baffle the physician at every point. Volumes have been written concerning its character, and other volumes still have been devoted to the various systems of treatment, which, from time to time have held the favor of the medical world. Nor is the subject exhausted. While much is unsatisfactory, and many new facts are continually discovered, opportunity yet remains for the investigator to discover more. Every new thought advances the welfare of mankind. It is the purpose of this paper to suggest some conclusions on the treatment of this disease which a somewhat extensive study, together with a practice of nearly thirty year's duration, have developed.

Rheumatism exists in three forms: the acute, the subacute, and the chronic. The prominent symptoms are well known. One most characteristic of acute rheumatism is inflammation, attended with intense pain in and around the joints, and with marked febrile and nervous conditions that indicate a disturbance of the nerve centers. Another noted symptom is the presence in the blood of an excess of lactic acid, which has a decidedly stimulant action on the cutaneous surface. Subacute rheumatism is a milder form of the same disease. Chronic rheumatism is a name which is loosely applied to many ailments not really of rheumatic origin. Properly speaking it is but a milder form of the subacute variety.

The pathology of rheumatism is acknowledged to be obscure, and consequently there is a great diversity of opinion regarding its essential nature. These different conditions are the expressions of but one morbid process with varying forms of intensity. At one time rheumatism was regarded as a general or an infectious disease; at another, as a fever; and again, merely as a peculiar inflammation of the joints and other structures. Of theories now in vogue, perhaps the most prominent one is that lactic acid accumulates in the body, and that the symptoms are directly traceable to the action of this poison upon the system. There is the nervous theory, the germ theory, and also the malarial theory.

Rheumatism is a constitutional disease, evolved in the system, the culmination of excretory products. The freedom from rheumatic symptoms immediately following a single attack, strongly indicates the expulsion of noxious matter from the system. As man is but the product of his environments, no valid claim can be made that any one cause is sufficient to account for all the disorder that this disease produces. It would be nearer the truth to call rheumatism the sum of all the transgressions of its victim. Lactic acid is a normal product of tissue metamorphosis. The morbid action which constitutes rheumatism gives rise to an excess of the acid, and this excess and the rheumatic symptoms both result from the same cause.

¹ Read before the American Medical Association, at Nashville, Tenn., May 30, 1890, in the Section of the Practice of Medicine.

It is reasonable to suppose that the special poison of rheumatism may find its principal obstruction while circulating through the tense fibrous tissue of the joints, and thus by pressure on the nerves of those parts, produce the pain characteristic of the disease. Retained excreta exercise two distinct actions, one, a stimulant action on the organ by which they are naturally eliminated, the other, a disturbing action on the tissues which supply the materials of their formation, and there is always danger from every arrest of the nutritive changes of the system.

Of the predisposing causes of rheumatism, one of the most important is that of inheritance, which can be traced in 27 per cent. of all cases. Some bring it on by overwork or exposure in damp or unsanitary surroundings. All nerve exhaustion tends to lower the vital reaction of the individual, so that a slight occasion often culminates in this disease; but in most cases the attack is induced by error or excess of alimentation. Indigestion is a frequent cause of rheumatism in the aged, and there is no doubt but that tobacco and alcohol are responsible for a large amount of this, as well as other disease. The action of tobacco on the nervous system, which is mistakenly supposed to be a tonic, is in reality only a toxic effect, and alcohol, by preventing the elimination of waste material, helps to aggravate every weakness and increase every predisposition to disease. These alcoholic drinks that contain lime salts are particularly injurious to rheumatics.

Rheumatic fever is simply a crisis, in other words a means of expelling morbid material from the system, and instead of trying to suppress it, we should aid nature in all her efforts to eliminate this poison. Disease, in whatever form it may appear, is but an effort of nature to free itself from some offending material in the system.

There is probably no disease to which so many different modes of treatment have been applied. Until about the middle of this century, bleeding was considered the sheet anchor in the treatment of acute rheumatism. Facts, however, tended to show that patients recovered more rapidly and satisfactorily when they were not bled, and the practice gradually was abandoned, for rheumatism as well as other diseases. Purgatives, diaphoretics, sedatives, and many other remedies have had their day. Then came the lactic acid theory, which naturally led to the alkaline treatment. Lemon juice also found favor for a time, with results quite as good as those from the alkalies. Of all these remedies, not one can be confidently relied upon. Indeed, it has been stated by good authority, that we have no remedy for acute rheumatism. Even the salicylates, salol, colchicum, iodide of potassium, etc., have proved a disappointment in many cases.

So unsatisfactory did all known remedies prove, that about thirty years ago some physicians gave up all treatment; simply kept the patient warm in bed, ordered a light, simple diet, and administered a placebo. Dr. Flint published in 1863 an account of thirteen cases treated on this plan with good results. Two years later Dr. Sutton, of Guy's Hospital, gave an equally good report of forty-one cases which were treated medicinally with mint water only. This expectant treatment was adopted by many, with results as satisfactory as those from more active measures.

For the treatment of a constitutional disease we must needs have a constitutional remedy, and this is furnished us in the modern Turkish bath. Having devoted over thirty years to the study of preventive

medicine, and having during that time been in an institution in daily contact with rheumatism, our opportunities have been exceptional. Of over three thousand cases of this disease under treatment, at least ninety-five per cent. have been either entirely relieved or greatly helped. Some who were treated over twenty years ago have stated that they have not had a twinge of rheumatism since. Under this treatment swollen joints have resumed their normal size, acute pains have been eradicated, and the patient restored to general good health. Men are to-day actively engaged in business who were brought to us by their physicians, who acknowledged that ordinary medication had failed to reach their case. The records of every establishment using this remedy will bear out the statement that remarkably few have persevered in its use without experiencing permanent relief.

It therefore needs no apology for bringing to the notice of the profession a remedy that has been almost invariably successful—and that is heat, the simplest, the easiest, and the most effective of remedial agencies. It is an important fact that we have perfect command over the blood circulation by subjecting the skin organism to the influence of artificial heat; and on this the whole sanative virtues of the bath depend.

This opens a new field, and offers results that are well worth investigation and trial. Every physician should know what a Turkish bath is, and acquaint himself with its practical workings. It is no new fashioned remedy of to-day. Its history dates back to tradition. We read of it in the early records of the Romans. In the Augustan period the bath flourished in its greatest magnificence. All the resources of science and art were made contributory to its completeness. When Rome overran Gaul and Britain, the bath attended her progress, and ruins of the splendid structures then erected are now to be seen in many places, notably at the Hotel Cluny in Paris and at the city of Bath in England. The success of the Roman armies was due in a large measure to the bath, which was to them the hospital and pharmacopœia. Traces of this bath are also found in ancient Mexico, in Ireland, and in many other countries.

For its modern revival we are indebted to David Urquhart, of honorable memory. He was an enthusiastic Englishman who had represented his country in Turkey, and there became enamored of the bath as an institution. One chapter of a book which he wrote, entitled "The Pillars of Hercules," and which was published just forty years ago, was devoted to the Turkish bath, and first called attention to the subject.

The Turkish bath of to-day is a most desirable resort, where all modern improvements have been brought into subjection for the comfort and enjoyment of the bather. Treatment by the Turkish bath immediately becomes a luxurious method of getting well. It is a sweating process, and heat is its vital principle. This can be used as high as 200° Fahr. and over in cases of emergency. It would be impossible for bacteria or disease germs of any kind to live in such a temperature, and it can be readily seen that with the circulation constantly coming under the influence of such an action, it would soon be purified and vivified. By this bath we can destroy personal contagion. This has been demonstrated in many cases. A few moments in the hot room brings a positive degree of comfort to the rheumatic patient, and soon so much relief is given by the heat that he will almost imagine that the disease has left

him. Every pore of the skin is made an open sluiceway for the discharge of a large amount of perspiration, disease-germs included. The good effect of manipulation, which immediately follows, is intensified by this heated condition of the body. Certainly nothing can purify the internal and the external man more than this process, nor can any agency better assist the vital energies in the struggle against disease. The circulation is invited to do its most perfect work, and as the improved action of any organ only comes through a quickened circulation of the blood in that part, so we find that every function influenced by this natural stimulus quickly takes on a normal condition. When the body is thoroughly heated and the circulation most active, the reaction from a cold application is most agreeable and salutary. Inflammation necessarily implies a want of proper circulation. Some cause has plugged up the finer terminal blood-vessels of the part inflamed. A condition of stasis has been brought about. By applying heat we relax the tissues, so that the circulation can pass on and the offending material be thrown out through the usual excretory channels. Whether or not this theory be true, the fact remains that thousands have experienced entire relief by this process.

In ordinary treatment it is observed that while the rheumatic patient may complain of the unpleasant effect of the perspirations, he never complains of their weakening effect, such as is observed in hectic fever. On the contrary, he may describe them as bringing great relief to the bodily condition. The perspiration and increased circulation brought about by the heat are not at all exhausting or debilitating, for there is little or no drain on the vitality. There is an essential difference in this respect from the perspiration brought about by exercise.

That this bath is weakening, or in any manner debilitating, is thoroughly controverted by many facts, among others that the shampooers, who work in the heat several hours daily, never lose a day from its effects. On the contrary, they are examples of good health and vigor. Invalids, weakened by disease, and not able to sit up all day, have been subjected to this treatment, once and even twice daily, for months at a time, the result being a constant improvement in health, strength, and flesh. In fact, the more desperate the case, the more active and persistent the application of the bath treatment. Many trades find it necessary for their workmen to labor in a temperature considerable above 100 degrees Fahr., and the men are far from being injured thereby. Prof. Carpenter, in Human Physiology, endorses this same idea, and Chabert, the Fire King, was in the habit of entering an oven, the temperature of which was from 400 to 600 degrees Fahr. In fact, the whole weight of testimony disproves the notion that this bath is in any way enervating.

For those disposed to rheumatism, a careful and well selected dietary should be chosen. Sufficient only should be eaten, and that thoroughly masticated, the food being plain and simple. By a thorough regime of this kind, and a systematic course of treatment by the Turkish bath all may be freed from any liability to this most uncomfortable disease. Much has been and can be done by the practitioner in the way of expectant treatment, or the let-alone policy, by preventing the patient from injurious dosing or troublesome friends, and mainly by making him comfortable and simply assisting nature to throw off the disease as fast as possible. The cold bath has a wonderful tonic effect, but the greatest relief is

brought about by the sweating bath, followed by the cold dash. The change from hot to cold has an invigorating effect upon the nervous system, and this is in line with the Turkish bath treatment. A little ingenuity will often enable the physician to improvise what will answer the purpose for the time being, in the patient's own home. Wet compresses to the inflamed joints sometimes give great comfort. It is plainly impossible, however, in private practice to have all the facilities to handle this disease as comfortably, or to relieve as quickly, as in an institution where all these arrangements are made a specialty. Therefore, when it is practicable, it is advisable to at once remove the patient to an institution where the Turkish bath and its accessories can be secured. The advantages of medical care, proper diet, and the regulation of treatment to the conditions of the patient, by one who has experience in the matter, are desirable.

Out of the multitude of rheumatic patients that have come under our care, it would be unnecessary and not to the purpose to give the history of even a tithe of them. We have, however, selected six typical cases, simply to illustrate the treatment.

CASE 76.—H. W. W., aged forty one, was brought to the institution January 29, 1867, helpless from acute rheumatism, having been under regular treatment over six weeks. He was unable to move a joint in his body without much suffering, and was obliged to have an attendant sit up to help him turn over during the night. He was given one treatment daily, and for one week was carried to and from his room to the bath. After this time he could walk unaided, and he continued to progress till February 25, when he returned to his business, gradually taking on his full duties. He had then received but twenty treatments. He has religiously continued the use of the Turkish bath once every week since, and to this day, May 20, 1890, he has had no return of rheumatism.

CASE 84.—T. B., Jr., aged thirty-five, came to the institution, April 25, 1867, suffering from rheumatism partly developed. After two treatments, the rheumatism was so acute that he was unable to move without great pain, attended with high fever. After six days, during which he took two treatments a day, he was able to return to business, and has not been troubled with rheumatism since.

CASE 251.—C. R., aged twenty, a young German, was brought to the institution suffering with acute rheumatism, unable to walk or help himself. He was given two treatments a day, and for two days he was apparently no better; thought himself that he was worse; but in one week he was able to go up and down stairs without help, and in three weeks he left for home without an ache or pain.

CASE 2,248.—H. L. R., aged thirty-five. Case of rheumatism in right shoulder, reported that after the first treatment he had the best sleep of any time during the previous fortnight, and with daily treatment improvement continued to a quick recovery.

CASE 2,806.—W. H., aged twenty-one. A severe case of chronic rheumatism which had been under regular treatment for several months. Brought to the institution by his physician. He was anemic, and much emaciated, weighing but one hundred pounds, pulse 120, temperature 101° Fahr. Only able to take a few steps, with much suffering and pain, and that with the aid of a stout cane. There was enlargement of both knees and ankle joints, and he synovial membranes distended by effusion. After three months he was restored to health, having taken

two treatments daily, and gaining in that time seventeen pounds in weight.

CASE 3,375.—Mrs. J. F. Y., aged forty, was brought to the institution, helpless from a severe attack of acute rheumatism. Any motion of the limbs caused intense pain. After one week of daily treatment she was able to go to and from her room unaided, and improvement continued till at the end of two months she was in better health than she had been in for years before.

The one thing most prominent in the treatment of rheumatism by the Turkish bath is the fact that it works in consonance with every physiological law, and that it tends only to place the system in harmony with itself. When we secure a harmonious interchange and natural action of every function, we have the highest condition of health that the individual is capable of attaining. Inasmuch as rheumatism is all-pervasive and all prevalent, and the Turkish bath is its most perfect antidote, the more we spread the knowledge of its good work, and help to popularize and promote its general adoption, the more we help on the better time coming, by adding to the length of days of man.

Society Notes.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Special Meeting, August 19, 1890.

W. S. FOSTER, M.D., President in the Chair.

EXHIBITION OF SOME URETHRAL INSTRUMENTS.

DR. STEWART: The first instrument is the urethragraph. A year ago, last July, I exhibited my first urethragraph. I have made a number of changes. This instrument is for the purpose of recording a diagram of the urethra, giving the exact circumference at every point. The next instrument I will show you resembles the first one. It is almost the same in principle. It is for a different purpose; it is a combined urethrometer and urethrotome, so made that it will either measure the urethra or cut a stricture. This instrument is inserted into the urethra as far as you may desire, usually to the bulbous portion. If you desire to cut a stricture, you first ascertain the size of the healthy portion of the urethra, the part you do not wish to cut, then permit the blades to open to the size you desire to cut. Having done this, fasten the screw on the upper surface and withdraw the instrument. The third instrument is the urethroscope, the fourth an urethral syringe.

DR. THOMAS: I have had no experience with the doctor's instruments. I did have a little experience in the doctor's presence with his first urethragraph. At the time it was not perfected, so that my experience will not serve in my remarks at present. The principle of the instrument is doubtless correct. I have been using the urethrometer of Prof. Otis, which I have considered the best in the market. The difficulty I found was this: that you had to cover the instrument with a gum tube, the gum tube always giving more or less resistance. After passing the urethrometer down as far as it would go to the bulbous portion, and then opening its arms to the full caliber of the urethra, then in withdrawing it when you would come to a stricture, of course the instrument would cease. Then, in order to pass through the stricture, you had to reduce the caliber until it would cut through the stricture, but in bringing it

through the stricture you could not tell where the stricture ended. You might pull your instrument anterior to the stricture. Now, that is the trouble with the Otis urethrameter. In the doctor's urethrameter, if the spring has the proper sensibility to come and go with the inequalities of the urethra, then it is a typical instrument. But the question is to me whether you can get a spring sufficiently graduated to come and go as you withdraw the instrument.

DR. STEWART: As Dr. Thomas has suggested, the spring in the instrument we used together was weak; this has been remedied.

DR. WERDER reported five laparotomies.

REPORT OF FIVE LAPAROTOMIES.

CASE I. Intra ligamentous cyst. Aged twenty-two years; epileptic; typhoid fever in October last, followed by bad health. Noticed a tumor growing since, reaching from one to one and one-half inches above the umbilicus down into the vagina, bulging out Douglas' cul de sac and pushing down the anterior wall of the rectum; in fact, almost completely filling out the pelvic cavity. The tumor was immovable, fluctuating, and distinctly pulsating both over the abdomen and in the vagina, suggesting the possibility of an aneurism. Exploratory laparotomy, March 29, exposed an intra-ligamentous cyst, which had to be peeled out of its capsule. It was a tedious and difficult task. Drainage. Patient made an excellent recovery, without rise of temperature and notable increase of pulse rate. Had an epileptic attack immediately after operation, then none for a week, though previous to operation she had a number of them every day. After first week they returned at intervals of several days.

CASE II. Pyosalpinx. Miss M. D., twenty-six years of age, had poor health for several years; about a year ago, she was obliged to go to bed, when an abscess ruptured into her rectum, which continued to discharge for several months. After the discharge had ceased, her health improved and she gained flesh, but six weeks later she experienced great pain in her right side, and when she entered the Mercy Hospital another abscess had ruptured into the vagina. She was extremely emaciated and anæmic. Laparotomy performed April 6. The anæsthetic used was the "mixture." Immediately after opening the peritoneal cavity she became asphyxiated. Respiration and pulse were arrested for fully five minutes; artificial respiration was performed, head and chest lowered, and hypodermics of whisky were administered. Probably ten to fifteen minutes passed until the respiration and pulse became normal and the operation could be continued. On introducing my hand into the pelvis, I found one large mass from which neither uterus, ovaries or tubes could be distinguished. After a great deal of trouble, I succeeded in freeing the right tube and ovary from their adhesions; both contained pus-cavities. The left tube was also removed with the greatest difficulty; its ovary, however, could not be found. A drainage tube was inserted. Twenty-six hours after the operation, a fecal odor was detected in the discharge from the drainage tube. The following day she commenced to discharge fecal matter in large quantities, and from now on most of her feces passed through the tube and on the sides of it, continuing to do so for a week. The wound was kept clean by enemata, which were immediately returned through the fistulous opening. During this time her appetite was poor, and vomiting very frequent, so that she became exceedingly weak. The fistula gradually closed up, so that at the time of her discharge from the hospital, there was only (sometimes at intervals

of several days) a slight discharge of flatus. The occurrence of this fecal fistula can only be explained by the fact that the left tube, distended with pus, had become adherent to the rectum and discharged its contents through the latter. In separating this tube from its old adhesions to the rectum, the old rectal fistula, of necessity, was reopened, and, as a consequence, by virtue of the life-saving drainage tube, the fecal matter found its way through the external wound.

CASE III. Pyosalpinx. Mrs. A., three years married, aged thirty years, had one child at eight months, and was never in good health since. Had three attacks of pelvic peritonitis since; with the last one she was brought into Mercy Hospital. A very tender mass could be felt on both sides of her uterus, which was diagnosed as a double pyosalpinx. Laparotomy, April 29. Tubes and ovaries on both sides very firmly bound down to pelvic floor and adherent to loops of intestines. They were brought up with considerable difficulty and tied off. Ovaries on both sides were firmly attached to their corresponding tubes, each ovary and tube forming one abscess-sac. Drainage. Patient rallied badly from the operation, and vomited incessantly. She had taken either very badly, a very large quantity being needed to keep her relaxed. The incessant vomiting was, therefore, attributed to the ether. It kept up for forty-eight hours; for thirty hours her pulse was about 160 and very feeble; had Cheyne-Stokes respiration, and an ashy color about her face. She was fed and stimulated freely by rectum, and forty-eight hours after operation she was much improved, her convalescence being then uninterrupted by elevation of temperature and with a good pulse; appetite was good, and she was sitting up in bed, when, on the evening of the twelfth day, a sudden change came over her; she complained of pain about the chest and of loss of appetite. Had shown symptoms of hysteria a day or two previous to this. I examined her carefully; her pulse was 100; temperature perfectly normal; abdomen flat without the slightest tenderness. She rested well during the early part of the night, but towards morning she became very restless, and died suddenly at 6 A.M. on the thirteenth day after the operation. A *post-mortem* examination could not be obtained. Her death was entirely unexpected and its cause very obscure, though I have reasons to suspect pulmonary embolism.

CASE IV. Solid tumor of right ovary and ascites. Mrs. S., aged forty-five, no children, consulted me about an abdominal tumor, situated on the right side of uterus, hard, irregular, freely movable, and reaching midway between the anterior superior spinous process of the ilium and the umbilicus. Lately she had suffered so much pain that she had to be kept under the influence of opiates constantly. The diagnosis was either solid tumor of right ovary or sub-peritoneal fibroid of uterus with long pedicle. Laparotomy, May 6. On opening abdomen a considerable quantity of ascitic fluid escaped. The operation was extremely simple, as there were no adhesions whatsoever. Patient made an uninterrupted recovery, the temperature never being above normal. The tumor, of the size of a large cocoa-nut, had become partly cystic and appears to be a fibroid of the right ovary.

CASE V. Abscess of left ovary. Miss Annie C., aged twenty-four years, had been in bad health for over a year. I was called to see her about a year ago, and found a large mass to the left of her uterus, not very tender to the touch, and fluctuating. She was greatly reduced in flesh and very weak. Under

treatment her general condition improved, but her local trouble remained the same, though local treatment was conscientiously employed for four months. I then advised laparotomy following my diagnosis of left pyosalpinx, but the operation was refused. She then placed herself under the care of another physician. Two or three months later, while going to her physician's office, on getting off the street car an abscess ruptured through her vagina, and this was followed by a severe attack of pelvic peritonitis. At this time I was again called in, and found the mass on her left side considerably larger and exceedingly tender. She was now very anxious to have the operation performed. Laparotomy, June 16. Removed a large ovarian abscess containing about a pint of pus. The sac was adherent to the omentum, intestines, anterior surface of bladder, and had to be peeled out; on doing this, the tube, firmly attached to it and to the pelvic floor, was broken off; the remaining portion was then brought up with great difficulty. The ovary was one large abscess-cavity, and the tube also contained pus. The right tube and ovary were, contrary to the usual rule, not removed, as the patient's condition was such as to make it dangerous to perform a second operation on her, especially as they seemed perfectly healthy. In breaking up the adhesions around the abscess-sac I accidentally ruptured it, and the pus poured freely into the abdominal cavity. This was thoroughly and repeatedly washed out with hot water, and a drainage-tube introduced. Her recovery was uninterrupted; the temperature and pulse remaining perfectly normal, except on the day after the operation, when the temperature rose to 100. She is now in perfect health and has gained much in flesh.

DR. MACFARLANE:—It is gratifying to see so many patients relieved of tumors who do well. I do not say that it occurs in the hands of all operators, but very frequently the patient is left in a condition nearly as bad as that in which she was prior to the operation, the only effect being to prolong life for a time.

DR. WERDER: I will simply state that it is very unfortunate when the patient is left in the condition spoken of by Dr. MacFarlane. It is very important in performing a laparotomy not to make your abdominal incision larger than necessary. A small incision only is needed, not more than three inches. Now, if this is united very carefully, and the stitches put in at proper intervals, I think hernias will not occur very often, though they cannot always be prevented. In regard to fistulas, those are things that will often occur from septic ligatures. If you have not your ligatures absolutely aseptic, it is very likely that a fistula will follow, but with perfectly aseptic material, it should be a very rare occurrence to have a fistula.

CASE OF TYPHOID FEVER.

DR. KEARNS: A boy twelve years old, in the third week, ceased to speak even in monosyllables, and this condition continued for about ten days. During this time there was no apparent impairment of intellect. Sitting at the bedside of the patient and telling him to put out his tongue, he did it instantly. Telling him to look toward me that I might examine his eyes, he did it instantly. The pupils of the eyes were markedly dilated. Then, at the expiration of these ten days, the case assumed the very opposite condition, and became loquacious; he would take up any conversation which occurred in the room and follow it up repeatedly. This condition continued day and night, with some short intervals of rest for

ten days, when it gradually stopped. The pulse was accelerated during this period of excitation. It was at a normal during the period of quietude. All this time the stomach had been in good condition. Now here are two extremes. What condition of the brain and nervous system is involved in these conditions of two extremes in the same patient and the same disease? This cerebral excitation was very difficult to control. The simple remedy, which appeared to have the desired effect, was calomel. I administered a gr. $\frac{1}{4}$ of calomel every two hours, then, when the bowels began to run off, in smaller doses. To me this was a very interesting case, and I ascribe the nervous symptoms to a complicating meningitis.

DR. THOMAS: During the month of April, I saw a patient with typhoid fever. The boy was thirteen years old. He had been sick about a week. The fever ran an ordinary course. About the twenty-first day there was defervescence, and I presumed the case was going the convalescence. I visited the boy as long as I remained in the city, and in the meantime he would not speak a word until the day before I went away, I got him to say one word. I did not feel uneasy about him, his temperature not being above normal. He went into the hands of Dr. McNeil. On my return, I found the boy all right, and was told that in speaking to his grandmother, in whose care he was, upon his beginning to talk again, the first word he said was cracker. He said, "Cracker, cracker, cracker," for three or four minutes; then he ceased calling for crackers. I looked upon it as caused by anæmia of the brain.

DR. STEWART: I remember a case where a man lost the power of the right arm. The loss was progressive, and then he had convulsions. The convulsions were in the arm affected. Subsequently they became general and he would become unconscious. The convulsions became very frequent, several times a day. An operation was performed under the supposition of lesion in that area. The man had had syphilis. Iodide of potassium had no effect on the case. The brain was uncovered and only a localized meningitis was found. Incisions were made into the brain and nothing was found. The man ultimately recovered the perfect use of his arm and had no more convulsions.

DR. MCKENNAN: I find that it is not at all uncommon to have peculiar mental states following typhoid fever—mental weakness, and also very frequently mental exhilaration. I have seen many cases of insanity which have been traced to typhoid fever. I have never seen a case of meningitis in a child with typhoid fever. The whole weight of authority goes toward the supposition that the lesion is purely of a functional character, and that there is rarely any structural lesion, although some authorities state the possibility that there may be embolism, which could only involve one artery.

DR. LANGE: No matter what cerebral symptoms we may have in typhoid fever, there is no justification for the assumption of meningitis. No matter how violent or how peculiar are the cerebral symptoms, the assumption of meningitis is not correct, is not justified. I do not know that meningitis and typhoid fever are incompatible; but I mean to say that *post-mortem* examinations in cases of typhoid fever which presented most violent and most strange ataxic symptoms have so invariably proven the absence of meningitis and of all inflammation, that such symptoms cannot be correctly assigned to meningitis or to any structural lesion, but are to be considered only as the toxic effect of the typhoid fever.

poison. Neither can I understand how the speech center can be affected by a meningitis without previous and greater injury to the motor areas, which, being in closer opposition to the meninges than the center of speech, would primarily and to a greater extent be subjected to meningeal pressure. For this reason, paralysis is as common in meningitis as aphasia (barring, of course, comatose cases), is rare.

The Polyclinic.

MEDICO-CHIRURGICAL HOSPITAL.

FOR SUBACUTE CONJUNCTIVITIS.

R.—Zinci acetatis..... gr. ss.
Aqueæ dest..... 3j.—M.

Or,

R.—Zinci sulphatis..... gr. ¼.
Acidi borici..... gr. x.
Aqueæ dest..... 3j.

M.—S. Use freely, three times a day.

Apply vaseline to the edges of the lids at night.
The former seems to act better in warm weather.
—Fisher.

FOR A CASE OF HEMOPTYSIS.

This was a large, well-nourished man, covered with prickly heat, and dripping with perspiration. Several bronchial hemorrhages had occurred within a week, followed by slight fever. He was ordered to abstain from liquids, to take a few drops of phosphoric acid to relieve thirst, and apply flying blisters to the chest. Internally he was given Gardner's syrup calcium hypophosphite, a teaspoonful four times a day.—Waugh.

FOR UTERINE HEMORRHAGE.

R.—Ext. cannabis Indicæ..... gr. viij.
Ext. ergotæ fl..... 3j.
Ext. hamamelis fl..... 3 ss.
Tinct. cinnamorni..... 3 ss.

M.—S. 3j every three hours.

—Montgomery.

ASTHMA.—This patient's paroxysms are preceded by sneezing. There is some hypertrophy of the nasal mucous membrane. He sweats profusely and is tormented with constant thirst. This renders him sensitive to every breath of air; and demands first treatment. He is directed to drink nothing but hot, weak tea, a tablespoonful every hour; all other fluids being interdicted, except a small cup of tea after each meal. The nasal affection is treated by the application of chromic acid, liquid vaseline with one grain to the ounce; and he is given this:

R.—Tinct. belladonnæ..... 3ij.
Ext. grindeliæ robust. fl..... 3j.
Tinct. hydrastis..... q. s. ad 3iij.
M. S.—3j. thrice daily.

—Waugh.

ABDOMINAL PAIN.—Three cases have come before me of constant, moderate pain in the abdomen, as the one symptom for which relief was demanded. The pain was of the same character in all; and the diagnosis only to be made tentatively. In the first, the course showed the pain to be due to caries of the vertebrae, finally causing death. In the second, death ensued, the cause being ulceration of the vermiform appendix with consequent perforation. The third case is before you; and here the pain is due to constipa-

tion, with impacted feces; vesical paresis is also present. He has been taking elixir of cascara sagrada, and compound syrup of hypophosphites; and using a hot enema whenever the pain became severe. So much relief has been experienced that he is confident of a speedy cure.—Waugh.

PHILADELPHIA HOSPITAL.

CLINIC BY E. LAPLACE, M.D.

GENTLEMEN: This little patient was brought into the hospital one month and a half ago, with a compound fracture of the tibia and fibula in the middle third. The wound in the skin was deep and was infected with dirt. It was, therefore, a double compound fracture, and, immediately after being taken to the wards, it was cleansed and put up in a fracture dressing permanently, as soon as possible after injury, and not disturbed until it was entirely well. There was a fracture, and therefore the indication was to replace it. There was a wound, and the indication was to sterilize it by removing all dirt and foreign matter, and cleansing with acid sublimate solution. In dressing the wound, we had to foresee swelling that would cause pain, and to meet it we applied sufficient cotton around the dressing to make allowance for it. The cotton yielded just as the swelling took place, and yielding did away with any pain. Having met these indications, this case had recovered under the *ideal treatment* of fracture. The leg was washed with acid sublimate and iodoform, put in and on the wound. The plaster of Paris dressing was applied to the leg, and the wound was left open. The plaster of Paris being applied, the wound was dressed with iodoform and sterilized cotton. The indications for dressing the wound were temperature and pain, for as long as there was no pain or fever we were sure the wound was doing well. This dressing remained in position for one month and a half, and when removed the bones had united perfectly, and the wound had healed without one drop of suppuration. The wound was never looked at from the day it was put up, even though it was a compound fracture of the lower extremity.

TUBERCULOSIS OF THE ANKLE.

Here is a case about which I have often talked to you. Here is a man, who has been apparently well all of his life; who sprained his ankle and has had a great deal of trouble resulting from it. In place of progressing as nicely as such cases generally do, it was noticed that the swelling would not subside, and that there was cedema, pain and fluctuation. We incised both sides of the ankle and removed a considerable amount of pus, which, when we first incised, was cheesy. That man had all his life the tuberculous diathesis, or tendency, and it only required a slight accident, that to us would amount to nothing, to develop tuberculosis that is present in the tendons and cellular tissue around the ankle-joint.

LUPUS.

The next case I bring before you is one of tuberculosis of the skin, or ordinary lupus. This case is highly interesting, from a diagnostic point. The woman has a double perforation of the palate, and, from her condition, as a rule, you will almost be disposed to diagnose it as a case of syphilis. Furthermore, she has had a miscarriage. This sore on her skin began three months ago, and came on gradually without any injury to excite its development. It is

purulent and the base is filled with rosy granulations. The skin and cellular tissue is affected, while at the apex of both lungs there is considerable consolidation with tuberculous matter. Notice the color, superficial condition and the tendency to dissect the skin, and is different from syphilis that ulcerates and burrows down into the tissues and has hardened edges.

TUBERCULOSIS OF THE EPIDIDYMIS.

The principal case I want to bring before you this morning, is one of tuberculosis of the epididymis—an affection that is very important from a diagnostic and therapeutic point of view. Three months ago this man noticed a lump in his scrotum. It has been his impression, all his life, that he had two testicles on the left side. Feeling the scrotum on the right side, it appears normal, but on the left it is different, for there are three enlargements. The top one is soft and fluctuating; the middle one is doughy and soft, and below is a hard mass, as hard as a stone. I might say that, until this morning, I was puzzled to know what this soft tumor at the top was, until I introduced an aseptic hypodermic needle and drew off a whitish fluid that had no spermatazoa in it on examination. It is a spermatic cyst. It is possible to have a spermatic cyst without spermatazoa in it. In dealing with tumors of the testicle, there are three great affections that almost stare us in the face—tuberculosis, cancer and syphilis. Generally, we must think of these three, and must prove, by exclusion, that it is one or the other. It is very easy to eliminate hydrocele and varicose veins. Inquire into the history, if he has had syphilis. This man did not have any of the signs of syphilis, such as eruption, sore throat or enlarged glands, and we can exclude it as the history is negative. This being eliminated, the next point to be considered is cancer. There is no hereditary taint or history; the tumor has come on in a short time, and was painful from the first, and became harder and harder, and took for its seat the epididymis, and I am sure it is not cancer. It must be tuberculosis. Why tuberculosis should attack the epididymis, we cannot explain, but 90 per cent. of the tumors of the epididymis are tuberculosis, especially in the head of it. Cancerous growths develop in the testicle and rarely attack the epididymis, except secondarily. Fibromas have been found to develop in the epididymis, but not in its head. In the treatment of this case I simply cut down on the tumor, and, having done so, put the hemostatic forceps around the cord, and cut it below, and ligate the vessels. The tumors and testicles are removed, and the parts dressed with iodoform and ether; apply a continuous suture and drainage and the wound will heal kindly. The specimens are now before us for examination. The upper one is a spermatocele, the other is a hydrocele, and lastly, the other tumor is tuberculous, with a cheesy deposit in the very center of the hypertrophied epididymis.

CLIMATE AND DISEASE.—1. In tracing the connection between the weather and disease, the tendency is to go too far and ascribe to atmospheric conditions more of a causative influence than we can prove. Because a climate may expedite or inaugurate a cure is no inherent proof that a climate, even though it have the opposite atmospheric conditions, will, *per se*, cause the disease.

2. Climate means more than the weather, and includes data concerning the contour of the land, the situation of hills and forests, and the nature and chemistry of the soil.

3. With no reason can we measure a climate by its absolute humidity alone, or ascribe to absolute humidity the supreme control over the origin of disease. Coincidence of data does not necessarily show a causative relation.

4. The degree of absolute humidity is more a resultant than a cause of atmospheric conditions, although it may be frequently a mediate cause of atmospheric changes. In no way, however, can we measure the value of absolute humidity, or discuss its influence upon our bodies, until we bring it into relation with something beyond itself. We are, therefore, constantly discussing relative humidity—if we use the English language with its proper meaning.

5. To assume that the weather controls health and causes disease by its influence upon the respiratory organs alone, is utterly to ignore the vascular and secretory systems of the body with their important functions. The assumption being unwarrantable, all conclusions and inferences based upon it are illusory.

6. *Absolute humidity, per se*, can have no influence upon health. Its influence depends upon the temperature and accompanying atmospheric conditions. A low absolute humidity in *cold* air is the mediate factor in abstracting *heat*, not moisture, from our bodies. A low absolute humidity in *hot* air will abstract moisture from our bodies proportionate in amount to the degree of relative humidity in which our bodies live.

7. *Relative humidity* measures the moisture absorbing powers of the air, is an expression of our surrounding atmospheric relations, and is modified by, and gives us a working notion of, the direction of the winds, and, at times, of the amount of sunshine. It represents conditions that are necessary to health and essentially local in their nature. It is, therefore, of great value to the physician.

8. The best single datum to be used with the temperature is the *dew point*, since in combination with the temperature it will enable us to determine both the *absolute* and the *relative* humidity. Definitely given, also, the amount of sunshine or of cloud, we can form a fair idea of the hygienic value of a given locality to health.

9. Condensed moisture has a great influence upon health. In some of its phases it is equally as important as humidity (aqueous vapor). When in the form of mists, exhalations, and fogs, it has, unfortunately, often been confounded with humidity.

10. The chief atmospheric conditions modifying health, and therefore causing disease, are sudden and violent *daily ranges in temperature*, and secondarily *in relative humidity*.

11. The *barometer* is an important but too frequently neglected instrument. A single observation of it gives us nothing that is of true value until it has been compared with preceding and succeeding inspections. The barometer should, then, be in a physician's office for daily use, and not for mere display.

12. We know, beyond doubt, the influence which certain low and wet localities exert upon health, but we do not understand completely the *Why* of this influence, so that we are not yet able to formulate with precision the general law under which our empirical observation is a particular instance.

13. I venture the prediction that when in future years our knowledge of the electricity of the atmosphere is more completely studied, we shall find in that mysterious force some solution of this problem. But I spin no gauzy theories upon the subject.

—Smith, *Boston M. and S. Jour.*

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WILLIAM F. WAUGH, A.M., M.D., Managing Editor.

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THE NEED OF A HOSPITAL, AT SITKA.

ALASKA, our remote northern possession, is in various ways attracting a considerable share of public attention. While the protection of the seal fisheries constitutes a national problem, other questions directly concerning the interests of the natives of that region demand the consideration of the press and the people. The urgent need of educational facilities has, to a certain extent, impressed itself upon the public, but the necessity for the establishment of efficient medical service is a matter not generally understood.

An editorial in the Sitka *Alaskan*, of August 9, comments in a corroborative manner on a paper by Dr. W. F. Arnold, U. S. N., in the *Southern Practitioner*, on Sitka's Sanitary Status. Much practical information is given concerning the lamentable physical condition of the Indians of Alaska, and the necessity for the amelioration of that condition and the relief of the suffering aborigines.

Alaska contains a native population equal to one-fifth of the total number of Indians cared for by the Government. Two million dollars is annually expended for the support, education and sustenance of the Indians in the United States, while those of Alaska receive only a paltry appropriation of twenty thousand dollars, towards the maintenance of a few industrial and boarding schools established and supported by religious bodies.

It is true that the Alaska Indians and Esquimaux are self-supporting, but that is no reason why they should not be afforded an opportunity to improve their physical condition, which, at present, is a disgrace and discredit to the Government, and will eventually lead to their extermination. Large hospitals should be erected and liberally supported, in order to stamp out the frightful contagious and infectious diseases; caused more by ignorance than arising from vice, such diseases being prevalent among 75 per cent. of the Alaska tribes.

The Government having neglected the welfare of her newly-acquired possessions, and disregarded all

recommendations and protests in behalf of these suffering people, the editor of the *Alaskan* hopes for good results in the way of reform, from the circulation of such papers as that written by Dr. Arnold.

Wherever a portion of the earth is penetrated by civilization, missionary efforts are established in behalf of the native population. The mandate to convert all nations is not left to the slowness of government legislation, but takes individual form and promptness. While the Prophet of Nazareth preached salvation of souls, he healed diseased bodies, establishing an example for true benevolence. Among the millions of those who profess to exercise the spirit of loving kindness in this great land, surely there is a fountain of charity ready to send forth healing waters for the diseased Alaska Indian. The hospital stands beside the chapel in foreign mission stations. Shall our own Territory be lacking in this feature? With the crowds of physicians and nurses annually issuing from our colleges and hospitals, and the ever responsive liberality of our people, must the endowment of a suitable hospital in this locality be left for national consideration alone? The story of the Indian has been a blot on the pages of history which should not be repeated.

UNSANITARY SCHOOL BUILDINGS.

SEVERAL months ago the Philadelphia Board of Health made a tour of inspection among the public schools of this city, with a view of ascertaining their sanitary conditions. The result was that seventeen schools were found to be unfit for use, on account of bad drainage, filthy closets and urinals, and other unsanitary conditions. At that time the Board requested that these schools should be "improved and repaired for the benefit of the health of the school children." Eight of these schools have been put in order, although it is still claimed that danger exists in some. The nine remaining schools have not been touched. They harbor, in all, 7,450 children for the best part of the day, in an atmosphere that cannot be other than disease-breeding. It is now rumored that if these buildings are allowed to remain as they are the Board of Health will declare them public nuisances, and order them closed. While such a procedure would throw nearly 7,500 children out of school, still this would be far better than for them to be confined for hours in such a dangerous building.

What is most conducive to a child's health is plenty of fresh air. Robbed of this, the constitution becomes enfeebled and undermined, and an easy prey to the diseases of childhood. Again, even when every precaution is used, children sickening with contagious diseases will be found in schools. Where the ventilation is good, the drainage efficient, and the closets sweet, the danger of contagion is infinitely lessened; but where the drainage is imperfect and the plumbing bad, the closets will soon become stopped up, and the exposed germ-laden excreta will not only vitiate the atmosphere, but may prove a source of actual contagion.

While we heartily commend the prompt action the Board of Health has taken in this important matter, we also see that their power is limited, and that they can only suggest and advise, and it is to be regretted that the Board of Education, after having been fully aroused to the gravity of the situation, has not done more to remedy the evil.

Annotations.

MEDICAL editors should make it a rule never to publish second-hand abstracts; but to limit their reproductions to abstracts from the original articles. Only in case of some item of undoubted practical value, which in the original form has escaped the eagle eye of the editor, should this rule be broken. For want of it, we see the parasitic journals, which are wholly made up of cuttings, credited with matter to which they have only the pirate's title. And, sometimes, the editor forgets that he has already seen an item, and republishes one as stale as the long-since exploded story about Drumine; which is actually resurrected by a Western journal and republished from it by another in the South. Usually both these journals are distinguished by the freshness and excellence of their selections.

BALLOONING OF THE RECTUM.

IN the *Lancet*, Burghard summarizes fifteen cases of this condition, first described by Bryant in January, 1889. This consists of an extreme dilatation of the rectal walls, so that the examining finger enters a large cavity, the walls of which have to be sought. Bryant stated that this condition exists only in connection with stricture of the rectum in its upper part, or of the sigmoid flexure. Of Burghard's cases five were associated with stricture (two as yet not confirmed by autopsy), two with fecal obstruction, and five with chronic constipation; two with spinal fracture, and one with extreme angular curvature from dorso-lumbar caries.

The cases of constipation were in old people, the youngest being forty-five. Matthew Duncan describes a semi-paralyzed "pouched" rectum in a woman, leading to retention of feces. In these cases there was no pouching, though the folds of Houston stood out like shelves, and sometimes upon them rested fecal matter. The greatest dilatation was backwards, so that the rectal wall seemed to be fitted into the sacral hollow.

The factor necessary to produce this ballooning is probably a paresis of the muscular portion of the rectum, with loss of contractility, distension by feces, flatus or enemas. Some cases showed that the rectal walls were thinner than normal. There is some analogy with senile atony of the bladder.

SCHULTZE says that beer should be drank out of gold-lined silver mugs. Next to these comes tin, and then covered salt-glazed stone mugs. Lead-glazed mugs and glass should be excluded.

Linke, however, disputes these conclusions, and states that 20,800 liters of beer must be drank from the worst kind of lead-glass to take in one milligramme of lead oxide.

Until the matter is settled it is best to refrain from beer; or at any rate to refuse it unless served in silver, gold-lined mugs.

The Medical Digest.

JACOBSEN (*Lancet*) reports a case of puerperal eclampsia occurring six days after delivery, and ending in death. The convulsion, from which she never recovered, occurred just after the patient had had a hot vaginal douche, during which she complained of feeling a little faint. The convulsions were replaced by coma, and in this state she died in about ten hours after the first attack.

DENUCE concludes an account of his researches upon the etiology of tetanus and vaccination as follows: We may then consider these experiments as ended and definitely adopt their results. They show that vaccination with strychnine gives to animals a considerable resistance against the tetanic virus, and furnishes an argument of great value in favor of the theory proposed and defended by Peyraud.

—*Jour. de Méd. de Bordeaux.*

PILCHER (*Med. Record*) reports fifty-one cases of whooping-cough treated by bromoform, and pronounces it the best known remedy when properly applied. It must be kept in dark, well-stoppered bottles. If it turns brown it should not be given. For children under one year he gave two to three drops thrice daily; for those from two to four years old three to four drops three to four times daily. The doses were increased on the third day. The quantity required to effect a cure was from five to twenty grammes; the time, ten days to four weeks. The dose was given in a teaspoonful of water. The bromoform sinks to the bottom of the spoon.

GAUCHER recommends boric acid as a remedy for tuberculosis. For five years he has experimented with this drug. The toxic dose is one gramme per kilo; or one-thousandth of the animal's weight. Elimination goes on actively by the kidneys; also by the sputa. Experiments on animals show that boric acid given with the food prevents the development of tuberculosis. In consumptives who took a daily dose of 15 grains, there was a notable diminution of the expectoration, which was also more fluid; the lesions remained stationary and the general health was more satisfactory. The author thought that a drachm per day could be taken by an adult.

—*La Medicine Moderne.*

ADDISON'S DISEASE.—Caven, in the *Canadian Practitioner*, reports a case of Addison's disease, which presented the following points of interest:

1. The limited area of the so-called bronzing, which was confined to the face, neck, hands and wrists. There was absolutely none on the buccal mucous membrane, or on any other part of the skin except that mentioned. Some small pigmented spots were found on the one arm, but these the patient said were moles, and had always been present.
2. The conjunctivæ were yellowish, as in jaundice; not pearly white, as usually found in such cases.
3. The pigmentation of the lymph glands of the mesentery appears to be an unusual feature. This pigmentation showed on the outside of the glands and on section.

The supra-renal capsules were enlarged, containing bean-shaped caseous nodules. The sympathetic ganglia and nerves presented no affection to be made out by the naked eye. The patient had been ailing for five months.

ACUTE MYELITIS.—In the *Med. Bulletin*, Hopkins describes a case of acute myelitis, in a woman seventy-one years old. She first felt a pricking in the fingers and toes; the sensation extending over the whole body. Partial loss of motion followed, so that she could not turn her head or body, but could make some movements. The inspirations were slow; expirations short and quick; breathing 20 per minute; pulse 60, and weak. Slight fever. No headache. Pupils normal. Examination showed tenderness over the vertebra prominens, where slight soreness had existed for some time previously. General anesthesia. Deglutition impaired. No history of injury, recent or old. Mind clear.

Bromide of potash was given in small doses, with digitalis; with chloral at night. Improvement commenced in a few days, and at the end of a month she was able to walk about her room.

HYOSCINE.—Sohrt found that this drug caused acceleration of the heart, from depression of the cardiac inhibitory apparatus without any change in the blood pressure. He therefore thought there was no effect on the vaso-motor center. Pavloff, however, finds that it causes at first a slowing of the heart, from stimulation of the inhibitory apparatus, afterwards acceleration from depression coming on. This last stage is antagonistic to eserine. The blood pressure was always increased for a time, then fell to, or below, normal. Pavloff also found it somewhat retarded respiration, and lowered the electrical irritability of the cerebral cortex. Hyoscine also antagonizes the effect of pilocarpine on the saliva; it has no action on the temperature or on the reaction of the blood; it lessens the irritability of the brain, and slightly the perception of pain; but does not affect tactile sensation. The chief difference from atropine is the effect of hyoscine in lowering the irritability of the cerebral cortex.—*Lancet*.

TEISSIER recommends the following treatment of typhoid fever:

1. Morning and evening, a cachet of naphthol, six grains; with salicylate of bismuth.
2. Four cold enemata every twenty-four hours to induce diuresis.
3. After the evening cold enema, another containing a drachm of extract of cinchona, and 9 to 15 grains of quinine dissolved in infusion of valerian, as a tonic.
4. Lastly, a regime composed of about 10 ounces of claret, milk, and a little soup.

This treatment was employed in fifteen consecutive cases, not selected, some being very severe. But one died, of suppurative nephritis, at the end of the attack. In nearly all, when antiseptics was complete, as shown by the green urine, the fever fell gradually, albuminuria disappeared, the spleen lost its abnormal volume, the tongue became remarkably moist and the saburral coating fell off. Short and speedy convalescence ensued.—*La Médecine Moderne*.

ANTIPYRIN IN DERMATOLOGY.—At the last meeting of the Dermatological Society of Berlin, Dr. Blaschko reported the results of experiences with antipyrin in the treatment of various affections of the skin. The remedy was first given in a case of urticaria papulosa. The case was one in which several well-known remedies, including tar and naphthol, had been used without beneficial effect. Not only was the itching relieved, but a permanent and complete recovery resulted.

Blaschko mixed the powder with equal parts of sugar, and of this mixture he administered as much as could be taken at a time, to half a teaspoonful. When prescribing the drug for children, the following formula was used:

R.—Antipyrin..... 5 parts.
Simple syrup 25 "

M. Sig.—One teaspoonful at night.

Also in simple urticaria antipyrin decidedly ameliorated the unpleasant symptoms, while it did not effect a permanent cure. In cases of nervous pruritus and prurigo, doses of from seven to fifteen grains, given three times daily, had most beneficial effects. The drug was similarly found valuable in pruritus senilis, pemphigus, and exanthema exudativum multiform. It also allayed the itching of eczema.

—*Wiener Med. Presse*.

INFREQUENCY OF SYPHILIS IN ENGLISH COUNTY PRACTICE.—Alfred Freer, President of the Birmingham and Midland Counties Branch of the British Medical Society, in a presidential address, speaks as follows of his experience with syphilis:

"I am old enough to remember M. Ricord's instructive and oft amusing lectures under the trees of the garden at the Hôpital du Midi, when he used to operate *sub die* early in the morning. At that time one could not help looking at the world through a syphilized atmosphere, and when I came to country practice, I found plenty of examples of the old scourge; but for many years past I have seen less and less of syphilis, so I suppose the nymph is beginning to take up residence more exclusively in cities and large towns; or, perhaps, she is shy of appearing before graybeards. Her prime exhibit, the true Hunterian chancre, on which the great Ricord used to expatiate so eloquently, has almost gone from my gaze. It is a matter for national congratulation that, owing to the improvement in habits of cleanliness among the people, if not to improved morality, this disease is far less virulent than formerly, even in our large centers." That syphilis is not a disease the physician is often called upon to treat is assuredly the case in Philadelphia; but we are not so sure that the affection is less prevalent than of old. Perhaps the enterprising retail druggist could throw some light on the subject.

OSTEOMYELITIS FROM PNEUMOCOCCI.—The pyogenic properties of the pneumococcus are to-day well known, and human pathology counts some cases in which this microbe has been considered the agent of suppuration. It has been often encountered in serous purulenta, especially in pleurisy; in the synovial membranes in suppurative arthritis, it has been found in a state of purity. As to the osseous tissue, the pneumococcus has been often found in mastoid suppuration, consecutive to otitis. Here the microbe passes to the bone by continuity of tissue with that first affected. But it may penetrate to the bone as it does to the endocardium and the meninges, by way of the blood. Recently, Netter and Mariage have seen the pneumococcus invade the foyers of multiple fractures, without external opening, and there excite suppuration. Leyden reported in 1885 a case of labor pneumonia, in which an abscess of the thigh developed; probably a localization of pneumococcus infection in the osseous tissue, through the medium of the blood.

Lannelongue reports the case of a child, seventeen months old, affected with an abscess involving

the whole right thigh and the articular cavity of the hip. The diagnosis was osteomyelitis of the upper end of the femur, with epiphyseal separation. The abscess cavity was opened freely, the pus evacuated, and some improvement followed; but the child died in one month of marasmus. On microbiologic examination of the diseased tissues, the microbes existing presented the characteristics of Frankel's micrococcus.

—*Le Bulletin Médical.*

OPERATION FOR BUNION.—Dr. Fowler, following Peterson, of Kiel, in his operations upon tuberculosis of this joint, attacks the joint from the outside, cutting backward between the toes, loosening the great toe sufficiently to allow turning it backward alongside the inner border of the foot; wedge-shaped pieces are then sawn from the joint surfaces of the first metatarsal and the phalanx thus exposed. The pieces removed from under the bunion are joined by the internal lateral ligament, leave a V-shaped depression, and represent from a half to two-thirds of the articulating surfaces.

The advantages claimed by Dr. Fowler for his operation are:

1. Ease of access to the diseased parts and their complete exposure.
2. The incision is through sound tissue.
3. The external lateral ligament is cut, after which the toe falls readily back into good position.
4. The exostosis is removed (Reverdin).
5. Tenotomy of the extensor pollicis can be done through the same incision.
6. The abductor pollicis is not touched.
7. The scar is out of the way of future pressure.

The operation fulfils these essential indications so satisfactorily that it may seem superfluous to make any changes, but in studying the operation upon the cadaver, it seemed to me that the incision and the loosening of the toe injured, unnecessarily, sound tissue. I accordingly made a long incision on top of the joint to the inside of and parallel to the tendon of the extensor pollicis, dissecting off the tissues from the inside of the joint with the periosteum elevator, till the bony surfaces were well exposed, when I found I could easily remove the V-shaped piece from the joint with the bone forceps. The toe now came back into place.

The piece removed should include more than half of the joint surface. It can be made at an angle, leaving the larger portion on the under side, which gives a broad portion to tread upon.

I have operated thus on three joints with good results.—Hunter, in *N. W. Lancet*.

INFLUENCE OF LA GRIPPE UPON SURGICAL OPERATIONS.—Verneuil presented a paper to the Academy of Medicine upon this subject. His conclusions were:

1. La grippe exercises a malefic influence upon wounds and surgical operations.
2. This is felt during the attack, and during convalescence.
3. It is especially manifested by a tendency to suppuration.
4. The pyogenic tendency is shown by the appearance of conjunctivitis, otitis, parotiditis, pleurisy, pericarditis, peritonitis, purulent arthritis, furuncles, isolated or multiple abscess, superficial or profound, orchitis, suppuration in organs diseased previous to the attack of la grippe, as ovarian cysts, hydrarthroses, cystitis, etc.

5. The venous, arterial, and lymphatic systems spontaneously became inflamed, with gangrene, from emboli derived from endocarditis vegetale.

6. Analogous complications in surgical cases, as:

7. Suppurations of wounds; even surgical cuts performed antiseptically.

8. La grippe following an operation delayed the healing, re-opened the wound and brought suppuration. If the wound occurred during convalescence, in some cases cicatrization did not occur normally; in others, the traumatism brought back or aggravated la grippe.

9. Certain complications. In benign cases, marked fever; in broncho-pulmonary complications, an added intensity, perhaps causing death; in others, septiceamia and pyohemia; in others, the wound inflamed, sphacelus even, and the margins erysipelatous or lymphangitic.

10. The possibility of la grippe must be taken into account when deciding questions about wounds. A brusque rise of fever in the course of a surgical case, should cause a suspicion of influenza.

11. Influenzal pyohemia is peculiar in that it occurs often spontaneously, the abscesses are fewer, they often contain pneumococci and other pyogenic microbes; rigors are usually absent, the fever does not oscillate so irregularly.

12. The termination in cure is less rare in influenzal cases. This renders the surgical treatment of these abscesses by incision, drainage and antiseptic lavage more hopeful.

13. The reciprocally injurious influence of la grippe and traumatism being demonstrated, surgeons should refrain from operating during this epidemic, except in cases of necessity; especially in affections of the respiratory tract.

14. Before operating on influenzal cases, their general health should be restored, and a tonic and restorative course employed, with internal antiseptics by means of quinine, naphthol, etc. Change of air would probably prove beneficial.

15. Influenza seems to accelerate the growth of tumors.

16. It also influences pregnancy and its sequels unfavorably.—*Bull de l'Acad. de Méd.*

Medical News and Miscellany.

OPIMUM can now be legally produced in China.

PROFESSOR DUHRING has gone to Bar Harbor.

INFLUENZA has appeared again in Breslau. Where's that "wave" theory?

PROFESSOR H. EARNEST GOODMAN has returned from the Berlin Congress.

PROFESSOR J. V. SHOEMAKER has also returned. He now speaks nothing but French.

THE death of Dr. Herman Rooker, of Philadelphia, was caused by opium poisoning.

A TYPHOID patient in the Cork Hospital died from an overdose of paraldehyde—about 3vj.

CHIROPODISTS smile gleefully as they hear that wooden shoes are likely to become popular.

DR. Z. P. BOYER has been appointed Medical Examiner of the Reading Railroad in this City.

THE Parisian authorities have taken steps to have the cars which transport cattle disinfected.

THE city of Toulouse wants a university. It is feared, however, that her morals are toulouse!

ICELAND now has the influenza, which on former visits has proved more fatal there than cholera.

DR. M. L. HERR, of Lancaster, arrived on the City of New York from Liverpool, with his daughter.

THE Eastern Dispensary, of New York, pays its doctors \$200 per annum, or about 33 cents per hour.

VIDAL recommends acetate of ammonia in scarlet fever, giving fifteen grains for each year of the age.

THE caterer who supplied the G. A. R. in Boston has been prosecuted for selling them adulterated milk.

CRESSON must be doubly delightful to the President and his family, after a summer at Mosquito Point.

DRS. EDWIN TOMLINSON, E. E. JEFFRIES, AND E. R. SMILEY were nominated last week for Coroner of Camden.

It is reported that Provost Pepper and his son have both been attacked with a mild form of grippe in Germany.

DR. CHARLES W. BROWN has removed from Elmira, N. Y., to 902 Fourth street N. W., Washington, D. C.

EDINBURGH has 236,000 inhabitants, of whom 103,095 receive medical charity. The Scot is certainly canny.

DR. J. MCFARLAND, of the resident staff of the Philadelphia Hospital, has gone to Berlin for a special line of study.

It is said that the Italian clergy, unlike those of France and the most part of England, do not object to cremation.

GARIBALDI'S widow is reported to be about to be married to Dr. Gabriel Tanfèrna, of the Naval Academy of Leghorn.

AUSTRALIA consumes 276 pounds of meat annually for each person, the United States 120, Great Britain 105 and Russia 48.

PROFESSOR W. S. STEWART addressed the Congress in German, and is detained in London until his jaw has been cured.

THE Vienna Society of Hygiene has begun a collective investigation to ascertain the factors contributing to longevity.

A NEW YORKER has ornamented all the projecting corners against which a man can run in, in his bedroom, with luminous paint.

THERE were treated at the dispensary of the West Philadelphia Hospital for Women, during August 131 cases; number of patients in hospital, 9.

S. QUALE, who recently died at Eau Claire, Wisconsin, left a wish, but no will, that his estate should be devoted to a hospital for cripples in Madison, when its value reached \$1,000,000. His wife has made the desired disposition of his property.

J. E. BLANK and J. Batt, of New York City, were brought before Judge Patterson at the Tombs for practising medicine without a license.

DR. AND MRS. HUGHES, of Fortieth and Chestnut streets, have returned from Spring Lake, where they have been sojourning during the heated term.

From May 13 to August 11 there were, in Spain, reported 1,672 cases of cholera, with 834 deaths; of which 80 per cent. were in the province of Valencia.

ESMARCH states his belief that the proximity of cemeteries, and drainage water from them, have no influence in the spread of epidemics or contagious diseases.

DR. WETHERILL has discovered another imbecile being improperly treated at home; this time it is a woman who has been locked up fifteen years by her brother.

Dr. CHARLES P. GRAYSON, of 122 South Forty-second street, has returned to the city after an extended visit to Narragansett Pier and other New England resorts.

A FEMALE patient mysteriously disappeared from St. Agnes' Hospital, and the authorities have not been able to discover her present whereabouts, or how she got out.

M'LE EVERAERT has been appointed Assistant-Physician to the Hôpital S. Jean in Brussels. This is the very first female staff appointment in any Brussels hospital.

MEDICAL INSPECTOR TAYLOR made a report last week upon the condition of some of the principal schools which had been declared unhealthy in a report previously submitted.

THE Italian government has proposed to France an international scheme of sanitary control for the Suez Canal and the Red Sea. The French journals sit down on the project at once.

AN oleoresin is now prepared from pumpkin seeds which is said to possess all the tannic properties of the latter. It is not pleasant to the taste. The dose is half an ounce.—*Pharm. Era.*

TWENTY dealers in milk in Philadelphia are to be prosecuted for selling watered, skimmed and colored milk. They are all persons who have groceries, etc., and merely keep milk as a side issue.

HEART failure caused thirty deaths in Boston during 1888; forty-seven during the first nine months of 1889; forty-one during the last quarter, and sixty-three during the first quarter of 1890.

A PRIVATE letter from Dr. P. D. Keyser, who was commissioned by Mayor Fidler to examine the sewage systems of leading European cities, during his trip abroad, reports that his investigations have been very profitable.

THE custom known as the *couvade* exists in Guiana, where a traveler says that a male Indian refused to help haul the canoes, on the plea that a child must have been born to him about that time, and that any undue exertion on his part might do harm to the infant. It is probable that this belief exists in all countries, and that this beautiful solicitude for the welfare of the unborn babe is often mistaken for pure laziness.

DR. NORVIN GREEN, the head of the Western Union Telegraph Company, is a Kentuckian of giant frame, nearly seventy-three years of age. He was a practising physician in the early days of his career.

THE wholesale poisoning of fish in Miller's and Griess' race, Pottstown, Pa., was investigated by Dr. W. B. Atkinson, of the State Board of Health, who found the trouble came from a lot of diseased meat which had been thrown into the water.

THE demonstration of the use of Dr. Ward Cousins' antiseptic tympanic membranes at the British Medical Association is said by the *Journal* to have been very successful. These were described by Dr. Cousins in THE TIMES AND REGISTER this summer.

SHONGOLOWICZ describes the microbe of granular ophthalmia as a short bacillus, very difficult to stain. Gentian violet is the best stain. Different segments take the stain irregularly, and this has led observers to look upon it as a micrococcus in chains.

WE have investigated many newspaper tales concerning the burial of living persons supposed to be dead, and have not yet found one in which there was the slightest truth. We would be glad to know of any case coming under the observation of any reader.

FROM every quarter the doctors who have been summering are flocking home, hearty and jolly, ready to relieve those who have borne the burden during the summer heat. Now is the time for the latter to take the vacation, without which no one is fit for the winter's work.

ONE of the best ideas yet broached is that of utilizing General Hastings' splendid executive abilities by placing him at the head of the World's Fair. With such a man as Director-General, and the enterprise of Chicago to back him, there could be no doubt of success.

FICTION has been grafted on the medical science. Announcement is made of a book in England in which the cheerful subject of "Diseases of the Liver" is worked into a "pleasant vein of fiction, thus combining useful knowledge on an important subject with all the charm of romance," as the prospectus puts it.

A LITTLE ripple of discontent was manifested by some of the nurses at the Philadelphia Hospital, on the admission of a colored pupil. To the credit of the girls, the feeling quickly evaporated. The new comer is a mulatto, from Oberlin College. She passed a creditable examination, and earned her admission.

GLEV had an opportunity to observe a man who was guillotined, within one minute after the knife had fallen. The heart beat for six minutes, the contractions of the auricles and ventricles being independent of each other. This is the first time in the history of science that such an observation has been made on a human body.

THE residents of Somerville, a settlement on the east side of Germantown, who send children to the Spencer Roberts School on Mill street, near Weiss avenue, are very much alarmed as to the future health of their little ones, if they use the water from the spring located outside of the school property on Mill street. The foundation of their fear lies in the fact that the spring will be fouled by the drainage from the wells of two outhouses now in course of erection, which stand about forty feet from the spring.

Lyada claims that yellow fever did not exist in Cuba until imported with slaves from Africa.

DR. DUNCAN MACFARLAN and about a dozen friends have been camping in the Adirondack Mountains, forty miles above Tupper Lake, for several weeks, and were very successful in both gunning and fishing. The doctor shot several bucks and does, and caught a large bear, and the whole party had a jolly, healthful, pleasant time, and returned much recreated.

DR. JUNKER, who learned in Central Africa to relish fried ants, and lived for years on a negro bill of fare, expresses decided views in his new book on the way to get along in the Dark Continent. He goes so far as to say that in his opinion the white man who accustoms himself to native food will keep in better health than if he enjoyed the best of European cookery.

THE laboratory of H. K. Mulford & Co. was totally destroyed by fire last week, and, unfortunately, was only partially insured; however, they are at work again, and the retail store, which was fortunately saved, has continued work uninterruptedly. It is a progressive firm composed of three young men, H. K. Mulford, Milton Campbell, and E. V. Pechin. They are prepared to fill all orders.

THE State Board of Charities held a regular meeting at the rooms 1224 Chestnut street, last week, with President Mahlon H. Dickinson in the chair. The other members present were Dr. J. W. C. O'Neal, of Gettysburg; Colonel H. M. Boies, of Scranton; Thomas W. Barlow, William B. Gill, and Cadwalader Biddle. Secretary Henry M. Wetherill, of the Committee on Lunacy, was also present on invitation.

IN using porcelain filters it is necessary, once a month, to open the filter, remove the porcelains, brush them well and plunge them for an hour into a mixture of five parts pure water with one part of commercial muriatic acid. They should then be rinsed in pure water, replaced, and the first quart of water filtered thrown away. If the water is muddy, this must be done twice a week. The Gate City stone filters should be brushed and rinsed every day.

NORTH DAKOTA has again approved her claims as the best place to emigrate from. In the preceding five years her record has been: three seasons the crops were killed by drought, once by frost in the middle of August, and the fifth summer the wind blew the wheat out of the ground. This season, what little grain had escaped mischance, was ruined on September 5 by hail, which broke the windows and drove the occupants to their cellars for shelter.

A VERY remarkable accident is described in the *Lancet*. An Italian vessel had in her hold a number of wine casks, into which sea water had been pumped to act as ballast. One of the crew opened the bungs to let out the water, when a stream of poisonous gas rushed into his face, and he fell back dead. Each of the other four men went down to the hold and instantly died. The gas increased until, when the captain looked down the trap-door to see what had become of the men, the rush of the gas overcame him, and he fell into the hold with the others. The only survivor of the crew called for help, and when the fumes had diffused so as to become harmless, the bodies were taken out. The accident is attributed to the action of the salt water, during midsummer days, upon the incrustated tartrates in the casks.

DR. G. BETTON MASSRY has removed his offices and sanitarium to 212 South Fifteenth St.

THE hot water pump at a factory refused to work; and it was decided to take it apart; which meant a heavy loss from stoppage of work. Just then a genius in matters mechanical was summoned, who gave three raps on the valve with a hammer, and "she went." Next day the genius proved he was no genius at all, by sending in his bill for \$25.50. The price amazed the payer, until he noticed that the bill read: "For fixing pump, \$0.50; for knowing how, \$25.00." He paid it at once.

The idea might be utilized by the doctors.

DURING the past few years the subject of hygiene has received marked attention from the German government. In nearly all the leading universities there are now hygienic institutes, thoroughly equipped in every way. Recently the new hygienic institute in the University of Halle was opened. The institute has a lecture-room, and also special chemical, physical and bacteriological laboratories.

At the banquet of the Surgical Section at Berlin, the menu was accompanied by a Latin ode, of which this is the first verse:

Beatus ille qui procul chirurgicis,
Securus inter epulas,
Hilariter maxillis exercet suis
Quæ mensa præbet munera:
Non minus fasciatus symphoniaci,
Jocose blandientibus,
Quam thyrsos Bacchi raptus pampinifero,
Solutus omnino opere,
Neque excitatur osteogenesibus,
Nec jam resecto stomacho
Neque intestino abhorret intususcepto,
Rectique vitat tenebras.

HAIL STONES.—The *British Medical Journal* states that Dr. Fontin, a Russian observer, has recently demonstrated the existence in hailstones of pernicious microbes or microscopic organisms. The water resulting from the melting of the stones used in the experiments yielded an average of seven hundred and twenty-nine bacteria to the cubic centimeter (a volume about the size of a small marble). Nine different forms of bacteria were discovered, including the bacillus mycoides. "As the abiding place of this bacillus is the earth, the fact that it and its pestilential congeners can be carried to the heavens and returned to the earth with hail, rain, and snow, and directly convey infection, is another of the discoveries which, while adding perchance to the glory of science, impress us with the blissfulness of ignorance, and also with the fact that in the midst of life we are in death."

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—The Mississippi Valley Medical Association will hold its sixteenth annual session at Louisville, Ky., October 8, 9, 10, 1890. The medical profession is cordially invited to attend. The President is Dr. Joseph M. Mathews, of Louisville, Ky.; Secretary, Dr. E. S. McKee, Cincinnati, Ohio; Chairman Committee of Arrangements, Dr. I. N. Bloom, Louisville. Gentlemen having business with either of these gentlemen can correspond with them, and they will give desired information. The Association is the outgrowth of the old Tri-State Medical Association, which consisted of Indiana, Illinois, and Kentucky. It has now spread over that territory so fertile in soil and sense, the Mississippi Valley. The best men of the profession are on the programme. Among them are the following: Love, Ohman-Dumesnil, Mudd, St. Louis; Geiger, St. Joseph; King, Kansas City;

Hollister, Lydston, Belfield, Chicago; Dunning, Indianapolis; Walker, Evansville; Reamy, Whittaker, Ransohoff, Thrasher, Ricketts, Lichberg, Cincinnati; Murdoch, Sutton, Daly, Wood, Pittsburgh; Scott, Vance, Corlett, Baker, Cleveland; Woodbury, Hare, Philadelphia; Wyeth, New York; Wile, Connecticut. The subjects cover every department of medicine and surgery. The efforts of the profession in Louisville to handsomely entertain their coming guests are on a magnificent scale, and none who go will regret having done so. The ladies will be given a pleasant time, and it is to be hoped that a large number of them will be present. To add to the interest of the occasion the American Rhinogloical Association will meet at the same place the same week, viz.: October 6, 7, 8, 1890. The Secretary is Dr. R. S. Knode, Omaha, Nebraska.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.—Programme of the Annual Meeting, to be held in the Hall of the College of Physicians, Philadelphia, Pa., Tuesday, Wednesday, and Thursday, September 16, 17, and 18, 1890.

First Day.—Tuesday, September 16, 1890. Business Meeting at 9 o'clock A. M., for Fellows only. Morning Session, 10 o'clock. 1. Address of Welcome, by William F. Waugh, and Response; 2. Some Facts Relating to the Diagnosis and Treatment of Placenta Previa, Dr. James P. Boyd, Albany; 3. Adherent Placenta; its Causes and Management, Dr. Aug. P. Clarke, Cambridge; 4. Venesection in the Treatment of Puerperal Eclampsia, Dr. Thos. Lothrop, Buffalo; 5. The Relation of Albuminuria to Puerperal Eclampsia, Dr. Wm. S. Gardner, Baltimore. Afternoon Session, 3 o'clock. 6. Tincture of Iodine in Hyperemesis Gravidarum, Dr. Llewellyn Eliot, Washington; 7. Practical Teaching in Obstetrics in America, Dr. Geo. H. Rohé, Baltimore; 8. The Axis-Traction Forceps; its Place in Obstetrics, Dr. Joseph Hoffman, Philadelphia; 9. The Vectis; a Forgotten but Valuable Instrument, Dr. Wm. Wotkyns Seymour, Troy.

Second Day.—Wednesday, September 17, 1890. Morning Session, 10 o'clock. 10. A Novel Mode of Exit for an Ovarian Cyst; Report of a Case in which the Contents were Vomited after Perforation of the Stomach, Dr. Geo. R. Dean, Spartanburg; 11. The Surgical Treatment of Peritonitis; With a Report of Cases, Dr. Joseph Price, Philadelphia; 12. Some of the Difficulties Met with in Abdominal Surgery, as Illustrated by Cases Taken from Personal Records, Dr. A. Vander Veer, Albany; 13. Complications Following Laparotomy, Dr. Wm. H. Wathen, Louisville; 14. Annual Address of the President (12 o'clock M.), Dr. E. E. Montgomery, Philadelphia. Afternoon Session, 3 o'clock. 15. Ovarian and Ligamentous Cysts Coexisting in the Same Patient; Operation; Death from Shock, Dr. Wm. Warren Potter, Buffalo; 16. The Elastic Ligature in the Extraperitoneal Treatment of the Pedicle, Dr. X. O. Werder, Pittsburgh; 17. Hydatids of the Broad Ligament; With Report of a Case, Dr. N. B. Carson, St. Louis; 18. Personal Experience with Gallstones and the Operation for their Relief, Dr. Wm. Wotkyns Seymour, Troy; 19. Report of a Case of Extirpation of Calculus from the Ureter by Combined Abdomino-Lumbar Section; Recovery, Dr. Rufus B. Hall, Cincinnati.

Third Day.—Thursday, September 18, 1890. Business Meeting, 9 o'clock A. M., for Fellows only. 20. Special Gymnastics in the Treatment of Diseases Peculiar to Women, Dr. John H. Kellogg, Battle Creek; 21. Report of Gynecological Cases Treated

with Electricity; With Remarks, Dr. Franklin Townsend, Albany; 22. Uterine Malposition and Disease as a Cause of Insanity, Dr. Geo. R. Shepherd, Hartford; 23. Infantile Vulvar Hemorrhage, Dr. Thos. E. McArdle, Washington. Afternoon Session, 3 o'clock. 24. The Treatment of Fibroid Tumors of the Uterus, Dr. L. S. McMurtry, Louisville; 25. A Further Discussion of Vaginal Hysterectomy, Dr. Chas. A. L. Reed, Cincinnati; 26. Presentation of Specimens; With Remarks on their Nature and Complications as Observed at the Operating Table, Dr. Joseph Price and Dr. E. E. Montgomery, Philadelphia.

NOTE.—Papers will be read by Drs. Myers, Marcy, and Branham, whose titles were offered too late for classification.

NEW PATENTS:—

PATENTS GRANTED SEPTEMBER 2, 1890

Ammonia-still.....Stroh & Osius.....Detroit, Mich.
Atomizer.....G. Schlauch.....Lancaster, Pa.
Making carbon tetrachloride.....E. G. Scott.....Port Sunlight, Eng-
land.
Fumigator.....L. Russell.....Luling, Tex.
Insecticide.....W. Mann.....Fresno City, Cal.
Preserving compound.....O. Williams.....Milwaukee, Wis.
Vaginal tampon.....C. C. Fredigke.....Chicago, Ill.
Truss.....Wells & Ewell.....Rochester, Mich.
Veterinary surgical device.....J. F. Van Ness.....Gloversville, N. Y.

TRADE-MARKS REGISTERED SEPTEMBER 2, 1890.

Perfumery. (The words
"Rhea Bouquet").....G. Mandelbaum &
Co.....New York, N. Y.
Soporific. (The word "Som-
nal").....Eisner & Mendelson
Co.....New York, N. Y.
Perfumery, toilet-waters, sa-
chet-powders, tooth-pow-
ders, and smelling salts. (The
words "Sweet Spray").....Ladd & Coffin.....New York, N. Y.
Nerve foods, or remedies for
nervous exhaustion. (The
words "Peruvian Nerve
Compound," with the word
"Peruvian" extending up-
ward at an angle in front of
the word "Nerve").....Standard Medicine
Co.....Boston, Mass.
Specific for Affections of the
Throat, Chest and Lungs.
(The words "Dr. Watson's
New Specific," with the por-
trait of Dr. L. Watson).....Cumberlandge, Garver
& Deal.....Carthage and Kan-
sas City, Mo.

LABELS ISSUED SEPTEMBER 2, 1890.

"Follmer's Crystal Eye Medi-
cine".....H. Follmer.....Jersey City, N. J.
"Marshmallow Skin Soap".....The Diamond Labo-
ratory Co.....Naugatuck, Conn.
"Cactus Balm Hair Grower".....J. W. Smith.....Boston, Mass.
"Cactus Balm Skin Cure".....J. W. Smith.....Boston, Mass.

PATENTS EXPIRING SEPTEMBER 2, 1890.

Hair wash.....R. Travis.....Elkton, Ky.
Medicinal compound.....M. P. Munder.....Baltimore, Md.
Medical compound.....S. E. Paddock.....Delaware, O.
Suppository mold.....P. I. Spenser.....Cleveland, O.
Truss.....J. F. Groves.....Whitefield, Co. Ga.

—Charles J. Gooch, Patent Attorney.

LOCK BOX 76, WASHINGTON, D. C.

FOR the week ending, September 2, New York city reported 11 deaths from typhoid fever, 1 from scarlet fever, 10 from measles, and 16 from diphtheria.

TO CONTRIBUTORS AND CORRESPONDENTS.

ALL articles to be published under the head of original matter must be contributed to this journal alone, to insure their acceptance; each article must be accompanied by a note stating the conditions under which the author desires its insertion, and whether he wishes any reprints of the same.

Letters and communications, whether intended for publication or not, must contain the writer's name and address, not necessarily for publication, however. Letters asking for information will be answered privately or through the columns of the journal, according to their nature and the wish of the writer.

The secretaries of the various medical societies will confer a favor by sending us the dates of meetings, orders of exercises, and other matters of special interest connected therewith. Notifications news, clippings, and marked newspaper items, relating to medical matters, personal, scientific, or public, will be thankfully received and published as space allows.

Address all communications to 1725 Arch Street.

INTERMENTS in Philadelphia, from August 30, to September 6, 1890:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess.....	2	2	Inflammation bladder.....	1	
Alcoholism.....	5		" " kidneys.....	2	
Anemia.....	1		" " larynx.....	1	1
Apoplexy.....	11		" " lungs.....	8	8
Bright's disease.....	12		" " heart.....	1	1
Burns and scalds.....	1	4	" " peritoneum.....	4	
Cancer.....	10		" " pleura.....	1	
Casualties.....	10		" " s. & bowels.....	4	7
Congestion of the brain.....	2	4	" " prostrate gl.....	1	
" " lungs.....	2		Inanition.....	1	14
" " liver.....	1		Jaundice.....	2	1
Cholera infantum.....	25		Leucocythemia.....	1	
" morbus.....	1		Locomotor ataxia.....	1	
Cirrhosis of the liver.....	2		Marasmus.....	1	29
Consumption of the lungs.....	37	5	Old age.....	7	
Convulsions.....	1	10	Obstruction of the bowels.....	2	
Croup.....	1		Paralysis.....	3	1
Cyanosis.....	2		Poisoning.....	1	1
Debility.....	2		Rheumatism.....	1	
Diarrhœa.....	2	4	Scrofula.....	1	
Diphtheria.....	1	3	Septicæmia.....	1	
Disease of the brain.....	1		Sore mouth.....	1	
Disease of the heart.....	14	2	Softening of the brain.....	1	
Drowned.....	2	1	Suffocation.....	1	
Dysentery.....	4	1	Suicide.....	1	
Dropsy.....	1	2	Syphilis.....	1	
Enlargement of the heart.....	1		Teething.....	1	3
Fatty degener. of the heart.....	1		Tumor.....	1	
Fever, scarlet.....	19	6	Uræmia.....	1	
" typhoid.....	2		Whooping-cough.....	1	5
Gangrene.....	2		Wounds, gun-shot.....	1	1
Inflammation brain.....	1		Total.....	194	188
" " bronchi.....	1	6			

Army, Navy & Marine Hospital Service.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from August 24, 1890, to September 6, 1890.

APPOINTMENT.

BAXTER, JEDEDIAH H., Colonel and Chief Medical Purveyor, to be Surgeon-General, with the rank of Brigadier-General, August 16, 1890, *vice* Moore, retired from active service. Headquarters of the Army, A. G. O., Washington, September 1, 1890.

Leave of absence for one month, to take effect September 15, 1890, is granted First Lieutenant Theodore F. De Witt, Assistant-Surgeon. S. O. 76, Headquarters, Department of Texas, San Antonio, Texas, Sept. 1, 1890.

Changes in the Medical Corps of the U. S. Navy for the week ending September 6, 1890.

WISE, J. C., Surgeon. Detached from Torpedo Station, and to the U. S. S. "Alliance."

FITZSIMONS, PAUL, Surgeon. Ordered to the Torpedo Station, Newport, R. I.

BRIGHT, GEORGE A., Surgeon. Detached from the U. S. S. "Constellation," and to Naval Academy.

OLCOTT, F. W., Assistant-Surgeon. Promoted to be Passed Assistant-Surgeon.

WENTWORTH, A. R., Passed Assistant-Surgeon, requests to withdraw resignation. Granted.

CRAWFORD, M. H., Passed Assistant-Surgeon. Detached from the U. S. S. "Monongahela," and granted two months' leave of absence.

KEENEY, JAMES F., Assistant-Surgeon. Detached from the U. S. S. "Richmond," and granted two months' leave of absence.

LOWNDES, CHAS. H. T., Assistant-Surgeon. Detached from Naval Academy, and ordered to the U. S. S. "Richmond."

HORHLING, A. A., Medical Inspector. In addition to present duties, ordered as President of Medical Examining Board at Philadelphia, convened by Department order, June 9, 1890.

KENNEDY, R. M., Assistant-Surgeon. In addition to present duty, ordered as member of the above Board.

OGDEN, F. N., Passed Assistant-Surgeon. In addition to present duty, ordered as member of the above Board.

MCCLURG, WALTER A., Surgeon. Granted a month's leave of absence from September 1.

KERSHNER, EDWARD, Surgeon. Granted two weeks' leave of absence from September 1.

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More major operations are performed in the Hospital connected with the school, than in any other institution of its kind in this country. Not a day passes but that an important operation in surgery and gynecology or ophthalmology is witnessed by the members of the class. In addition to the clinics at the school published on the schedule, matriculates in surgery and gynecology can witness many operations every week in those branches in our own hospital. The Babies' Wards occupy a building next door to the main structure, and furnish great facilities for the study of infantile diseases. Courses are given in Diseases of the Rectum, Surgical Anatomy, Operative Surgery, Intubation of the Larynx, and Ophthalmoscopy.

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Surgery.—Lewis S. Pilcher, M.D., Seneca D. Powell, M.D., A. M. Phelps, M.D., Robert Abbe, M.D.

Diseases of the Rectum.—Charles R. Kelsey, M.D.

Diseases of Women.—Bache McEvers Emmet, M.D., Horace T. Hanks, M.D., Charles Carroll Lee, M.D., J. R. Nilsen, M.D.

Obstetrics.—C. A. von Ramdohr, M.D., Henry J. Garrigue, M.D.

Diseases of Children.—Henry Dwight Chapin, M.D., Joseph O'Dwyer, M.D., J. H. Ripley, M.D.

Diseases of the Eye and Ear.—D. B. St. John Roosa, M.D., W. Oliver Moore, M.D., Peter A. Callen, M.D., J. B. Emerson, M.D.

Diseases of the Nose and Throat.—Clarence C. Rice, M.D., O. B. Douglas, M.D., Charles H. Knight, M.D.

Veneral and Genito-urinary Diseases.—L. Bolton Bangs, M.D.

Diseases of the Skin.—R. W. Taylor, M.D.

Diseases of the Mind and Nervous System.—Charles L. Dana, M.D., Graeme M. Hammond, M.D., A. D. Rockwell, M.D.

Anatomy and Physiology of the Nervous System.—Amelrose L. Ranney, M.D.

Pharmacology.—Frederick Bagoe, Ph. B.

Hygiene.—Edward Kershner, M.D., U. S. N.

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DR. B. ST. JOHN ROOSA, M.D., LL.D., President.

CLARENCE C. RICE, M.D., Sec'y.

226 E. Twentieth Street, New York City.

Notes and Items.

MEDICAL SERVICES, TO DATE.—"Doctor, what shall I do to keep cool in this dreadful hot weather?"

"Do? Nothing at all, madam."

"WHAT this?"

"That's your condensed milk."

"But I ordered a quart—that's no quart."

"Yes it is. It's a condensed quart."

VICTIM OF RAILROAD ACCIDENT.—"Doctor, do you think I can recover?"

Doctor: "Certainly."

Victim: (eagerly)—"How much?"

A DOCTOR AND AN UNDERTAKER heard of a man who was hurt near Menominee, and rode to the scene of the accident in the same rig, the former taking his pill box and the latter his coffin. The doctor got the job.—*Detroit News*.

INSTRUCTION IN MASSAGE.—A course of lessons in Massage and the simpler Swedish Movements will begin at the Movement Cure Hall of Dr. Benjamin Lee, 1532 Pine Street, Phila., on Monday, October 6th, at 2.30 P.M. Fee for the course, \$100.

WHEN a certain editor somewhere (dont ask where) was trying his unlevel best to explain that a certain exposure would not have been wrung from him if he had been treated with any sort of decency, the champion proofreader, dwelling in the upper ether where fine inspirations float, made the poor fellow say: "Had we been created half decent." Notice of interment to follow.—*New York Tribune*.

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Editor: "Oh, you needn't go to that trouble. Just leave \$1 subscription price and we'll send it to you."

—*Goshen (Ind.) News*.

FIRST SENSATIONAL EDITOR—"Don't you know that what you published about me the other day was an infernal lie?"

Second ditto: "Why, of course, it was. You don't suppose you have a monopoly of lying in your paper, do you?"

—*Puck*.

LIVING ORGANISMS.—First Scientist: "Yes sir, every drop of water should be boiled. Think of the living organisms we may gulp down in one glass of water."

Second Scientist: "True, too true. By-the-way, it's past lunch time and I feel hungry, dont you?"

First Scientist: "Yes, let's go and get a dozen raw."

CANNIBALISTIC.—A yellow cur came rushing out of a meat market on State street yesterday, a little in advance of a ten-pound weight propelled by an angry butcher. The animal had a string of wienerwurst sausages in its mouth.

"Another case of dog eat dog," observed a bystander.

And in the silence that ensued a street band in the distance played "I—e A—e R—y."—*Chicago Tribune*.

The Queen's last "Free Trip to Europe" having excited such universal interest, the publishers of that popular magazine offer another and \$200 extra for expenses, to the person sending them the largest list of English words constructed from letters contained in the three words "British North America." Additional prizes consisting of Silver Tea Sets, China Dinner Sets, Gold Watches, French Music Boxes, Portiere Curtains, Silk Dresses, Mantel Clocks, and many other useful and valuable articles will also be awarded in order of merit. A special prize of a Seal Skin Jacket to the lady, and a handsome Shetland Pony to girl or boy (delivered free in Canada or United States) sending the largest lists. Everyone sending a list of not less than twenty words will receive a present. Send six U. S. 2c. stamps for complete rules, illustrated catalogue of prizes, and sample number of *The Queen*. Address *The Canadian Queen*, Toronto, Canada.

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Preliminary examination, or equivalent degree and three years graded course, obligatory.

Instruction is given by lectures, recitations, clinical teaching, and practicable demonstrations. In the subjects of Anatomy, Pharmacy, Physiology, Hygiene, Therapeutics, Histology, and Pathology, the usual methods of instruction are largely supplemented by laboratory work.

Examinations are held at the close of each Regular Session upon the studies of that term. Although the degree of Doctor of Medicine is conferred at the end of the third year, a fourth year is earnestly recommended, at the end of which the degree of Doctor of Medicine cum laude is given.

FEES.—Matriculation, \$5; first and second years, each, \$75; third year (no graduation fee), \$100; fourth year free to those who have attended three Regular Sessions in this school, to all others, \$100. Extra charges only for material used in the laboratories and dissecting-room. For further information or announcement address, E. E. MONTGOMERY, M.D., Secretary, Medico-Chirurgical College, Cherry St., below 18th St., Phila., Pa.

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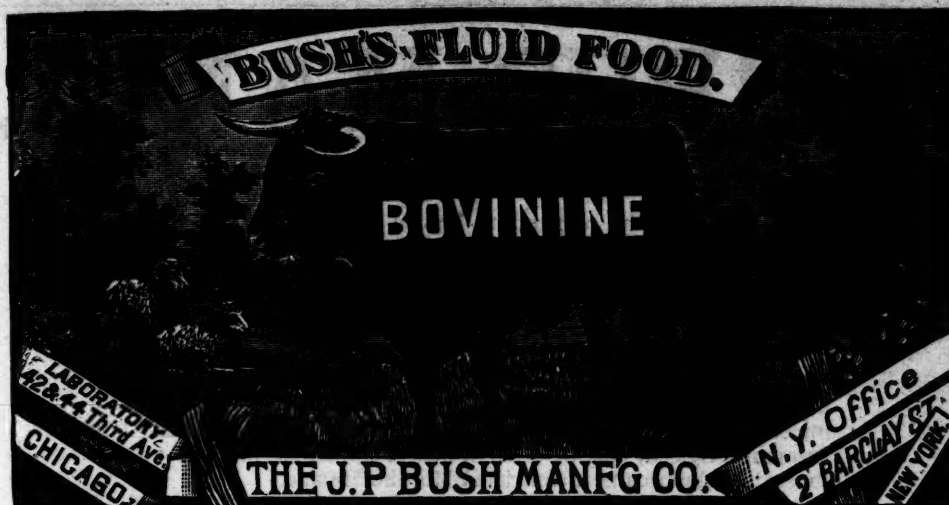
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FROM AN ESSAY READ BEFORE THE AMERICAN MEDICAL ASSOCIATION AT WASHINGTON, D. C., MAY 6th, 1884.

By B. N. TOWLE, M.D., OF BOSTON.

"Nervous debility and neuralgia are often the results of nerve starvation. They are now, more than ever, the dread of every intelligent physician, and the terror of all business men. The weary hours of pain, and the sleepless nights of those suffering from nervous diseases, are but the beseechings of an exhausted nerve for food. Hungry and starved, they make their wants known by the pain they set up as their only agonizing cry; and no medication will give permanent relief until the hunger is satisfied.

*Our research, then, must be to find a more easily digested and assimilated food.

Observation seems to sanction the fact that vegetable food elements are more readily assimilated by persons of feeble digestion than are the animal food elements, and especially when they have undergone the digestive process in the stomachs of healthy cattle. The juices of these animals, when healthy and fat, *must* contain all the food elements in a state of solution most perfect, and freed from all insoluble portions, and hence in a form more easily assimilated than any other known food.

I have used Raw Food Extracts for more than eight years, in a large number and variety of cases, and in no case of malnutrition has it failed to give relief.

I have given it to patients continuously for months, with signal benefit, especially in complicated cases of dyspepsia, attended with epigastric uneasiness arising from enervation, and in nervous debility of long standing. The sudden and full relief this food affords patients who have a constant faintness at the stomach, even immediately after taking food, shows how readily it is assimilated. This faintness is a form of hunger, and is the cry of the tissues for food, not quantity but quality—a food that the famishing tissues can appropriate and thrive upon.

Raw Food is equally adapted to lingering acute diseases. I have used it in the troublesome sequelæ of scarlatina, where there was exhaustion from abscesses in the vicinity of the carotid and submaxillary glands; and in protracted convalescence from typhoid fever, with marked advantage. The cases that I especially value it in are laryngeal consumption and nervous exhaustion, in which cases there is always more or less derangement of the digestive tract, such as pain in the stomach, constipation, eructation of gases, distress after taking food, etc. Raw Food should be taken with each meal, the patients taking such other food as they can readily digest, in quantities suited to the individual case.

It adds much to the nutrition of the patient, overcomes the constipation, subdues the nervousness by increasing the strength, and is just the amount added which is required to secure success."

The unsolicited opinion of Surgeon-General Murray, U. S. A. (Retired).

"It gives me pleasure to give my testimony to the very great value of BOVININE as a dietetic preparation. I have used it for more than a year in a very aggravated case of nervous dyspepsia, and have found it to answer very much better than any of the many preparations or extracts of meat before used.

I find that it keeps perfectly even in the warmest weather; is very easily prepared for administration, and it has proved acceptable and beneficial in every case in which I have known it to be given."

PHILADELPHIA, PA., March 1st, 1887.

Very respectfully and truly yours,

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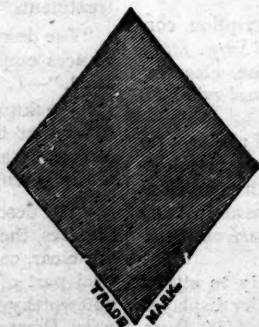
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